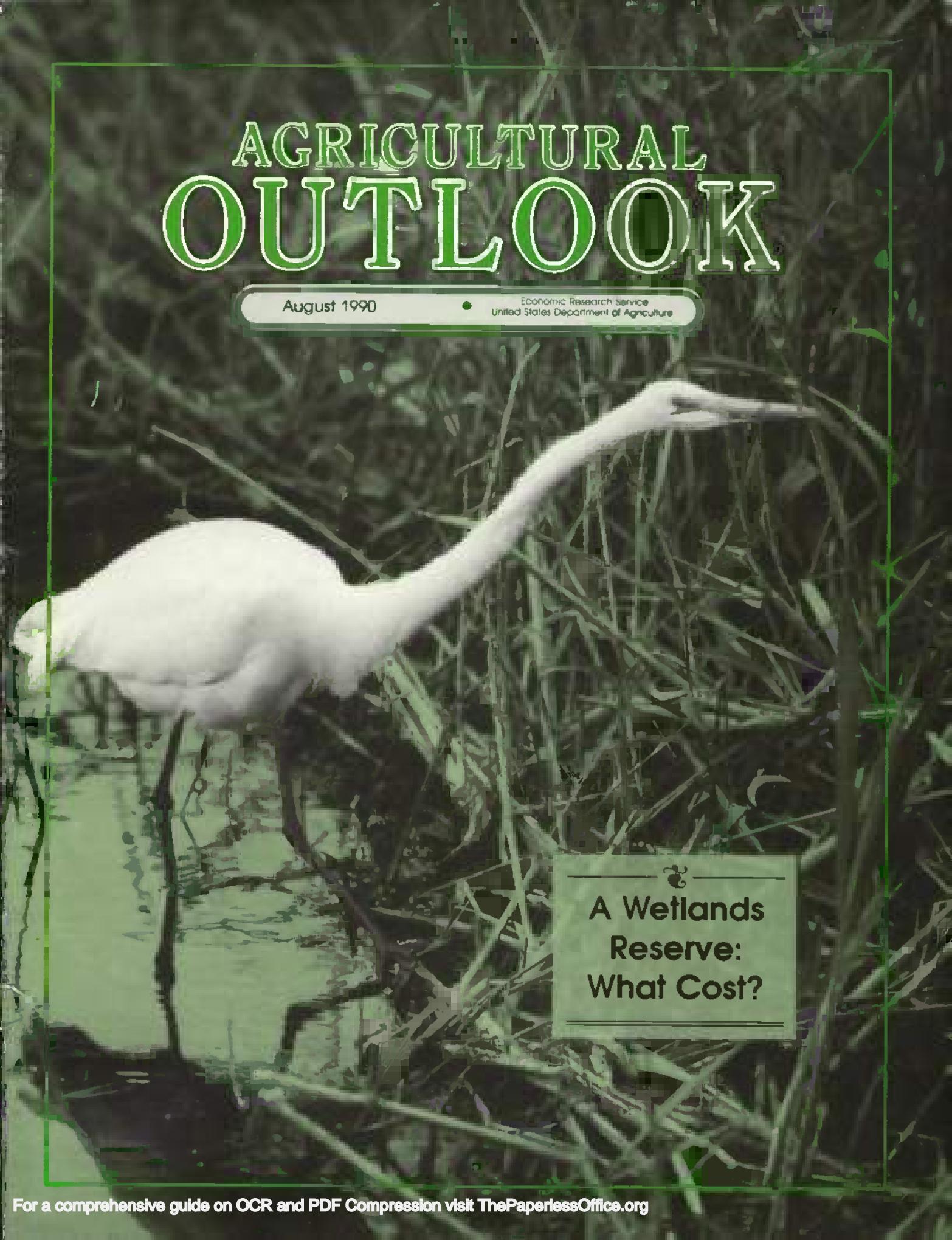


# AGRICULTURAL OUTLOOK

August 1990

Economic Research Service  
United States Department of Agriculture



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A Wetlands Reserve:  
What Cost?

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# AGRICULTURAL OUTLOOK

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## News of U.S. Crops, Poland's Agricultural Crisis, "Big Green," and Brazilian Economic Reforms

**R**ecent crop developments and strong red meat prices have improved farm income prospects for this year and next. The gains will go primarily to corn, soybean, and cotton growers. Livestock producers' profit margins will be squeezed by higher feed costs, but remain strong.

The weather and farmers' planting decisions have modestly lowered USDA's estimates of U.S. corn, sorghum, soybean, cotton, and winter wheat output in 1990/91. Nonetheless, the total U.S. wheat crop is expected to rise about 33 percent from a year earlier. This will help lower season average farm prices to \$2.80-\$3.20 a bushel from \$3.72 a year earlier.

For U.S. corn and soybeans, however, a wet spring that delayed plantings and helped hold down area put upward pressure on forecast farm prices. The anticipated shift from corn to soybeans did not materialize; farmers quickly planted corn in June as fields dried out.

Soybean area dropped more than expected, perhaps because farmers were leery of large foreign and domestic crops, and found corn more attractive. So corn prices are expected to be \$2.50-\$2.90 a bushel, up from \$2.35-\$2.40 in 1989/90. Soybean prices probably will be in the \$5.50-\$6.75 range, compared with \$5.70 last year.

Global rice production is forecast to hold steady in 1990/91, bolstered by near-record crops in India and China. World oilseed output likely will rise 4 percent from a year earlier. Oilseed production in the EC is rebounding a sharp 15 percent. With tighter U.S. soybean supplies and strong overseas production likely, U.S. soybean exports are expected to slip a bit.

**Polish farming is now in a crisis, and agricultural output there likely will drop in 1990. Farm input prices remain stubbornly high, reflecting a lack of competition.**



lion among suppliers. Inefficient and monopolistic processing and marketing sectors, coupled with weakening demand, are holding down farm prices. In response to farmer protests, the Polish government has introduced some subsidies, but so far has resisted demands for large direct supports.

President Collor's tough new reforms have brightened Brazil's long-term outlook, but they also portend a recession for the near term. Three major changes will affect farmers: moving to a floating exchange rate, removing nontariff barriers, and imposing a new tax that will encourage agricultural investments.

In the short term, Brazil's agricultural exports probably will increase. But in the long term, opportunities for sales to Brazil should expand as well if markets open and domestic demand recovers.

Vietnam quickly shifted from being a major rice importer to the world's third largest exporter, thanks to market-oriented reforms in 1988. Farmers may now lose land for 10-25 years, market

their own output, and purchase needed inputs.

Vietnamese farmers responded by boosting output 10 percent in 1988/89; output is forecast up another 7 percent in 1989/90. Favorable weather both seasons also spurred the gains. After exporting 1.4 million tons in 1989, Vietnam is expected to sell another 2 million on world markets this year. But Thailand will be scrambling to regain lost market share in 1991, so Vietnam's exports are projected to drop 15 percent next year.

California voters will set public policy on farmers' use of pesticides this November by voting on the "Big Green" initiative. Big Green would ban the use of chemicals that are suspected of being carcinogenic or reproductively toxic. If Big Green passes, some estimates indicate that 70 percent of the pesticides now used stand to be eliminated in California.

Some researchers have found that the loss of fungicides and insecticides would cut California lettuce and tomato yields 50-60 percent and boost consumer prices. Other research suggests that the output of several major fruit and vegetables would drop about 28 percent and prices would go up by 50 percent.

A wetlands reserve is on the agenda for the 1990 farm bill. Legislative proposals call for reserves of 1-2.5 million acres of wetlands. The government would pay landowners for restrictions on agricultural use of existing wetlands and wetlands restored from cropland.

Government expenditures for a least-cost 1-million-acre restoration program are estimated at \$194-\$286 million. For a 2.5-million-acre reserve, costs would rise at least to \$845 million to \$1.3 billion. Survey, appraisal, and other administrative costs are not included in the estimates, and likely would be significant.

## Agricultural Economy

# U.S. Output Forecasts Tightened

**S**ince March, the weather and farmers' planting decisions have modestly lowered USDA's estimates of U.S. corn, sorghum, soybean, cotton, and winter wheat output in 1990/91. Nonetheless, total U.S. wheat production is still expected to rise sharply from a year earlier, while the corn crop likely will be up only slightly. Soybean output will drop, and a bit more than farmers' planting intentions suggested.

A warmer, wetter spring is partly behind the recent changes; farmers were initially restrained from harvesting winter wheat in some parts of the country and were unable to maintain a normal pace when planting spring grains. So the corn that was planted late is more vulnerable to any abnormally hot weather during the critical midsummer growing months and to early frosts in the fall.

For wheat, however, weather conditions improved and the harvesting pace picked up dramatically, helping to make up for lost time. Combined with an upward revision in the wheat stocks estimate, the crop's generally good prospects mean that prices will drift down. Still, winter wheat has suffered from some weather-related disease problems.

For corn and soybeans, however, weather developments and less planted area put upward pressure on prices. And prices will be more volatile through the summer as traders react to the latest weather forecasts. Assuming normal weather, coarse grain and soybean prices will post larger gains than were expected a month ago.

Nationally, this will put upward pressure on farm income in 1990 and 1991. However, stronger corn prices will be somewhat offset by smaller government deficiency payments. Any additional



income will go primarily to coarse grain, soybean, and cotton farmers.

But not all corn farmers will share in the benefits: those hit hardest by the excess rainfall are likely to see their incomes go down sharply unless they signed up for USDA's O/92 program. Similarly, those cotton growers in parts of Texas and Oklahoma who lose output to midsummer drought will have a tough year. Livestock producers will be pinched by

higher feed costs and weakening meat prices.

### Sixth Wettest May On Record

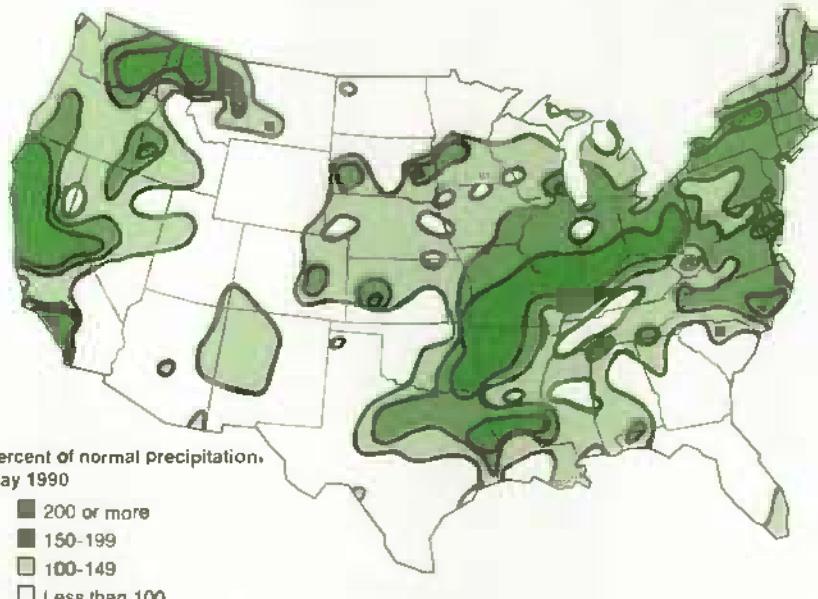
Over the entire U.S., this past May was the sixth wettest since 1895. Rainfall was especially heavy during March-May in Arkansas, Idaho, Iowa, Massachusetts, Missouri, and Oklahoma. In these states, this spring was wetter than 90 of the past 96 years. Severe flooding cut winter wheat farmers' yield potential in Arkansas and Missouri.

In sharp contrast, some durum wheat growers in North Dakota and Montana are experiencing their third consecutive year of abnormally dry weather. Perhaps in response, plantings are estimated to be up from what farmers said they would plant in March, although still down from a year ago.

Many analysts thought that the heavy rainfall would cause farmers to switch from corn to sorghum or soybeans, which are less vulnerable to the midsummer heat. In addition, soybeans mature faster than corn.

But the weather improved in the first 2 weeks of June, and many farmers got

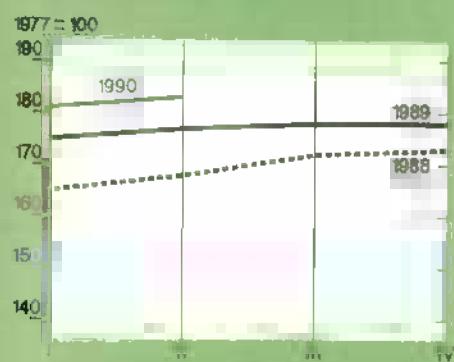
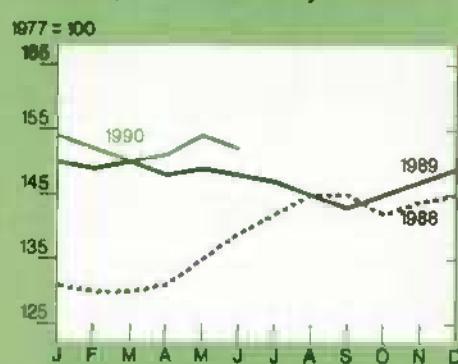
A Wet May Clouded the Forecast



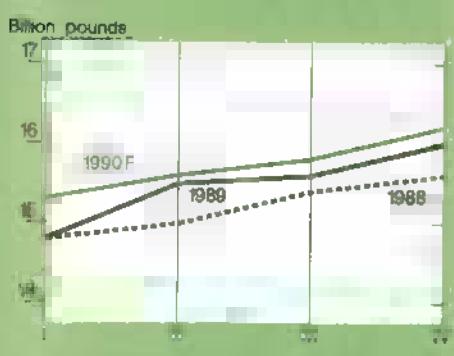
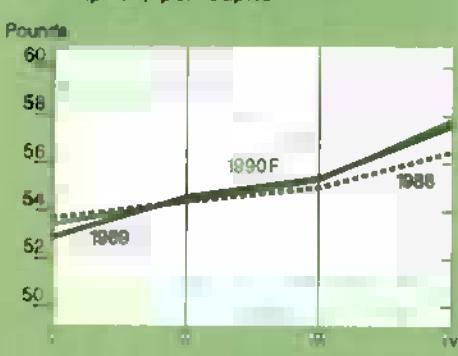
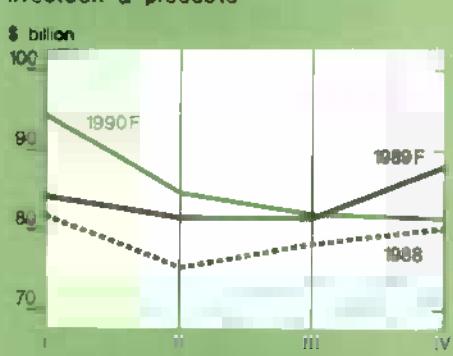
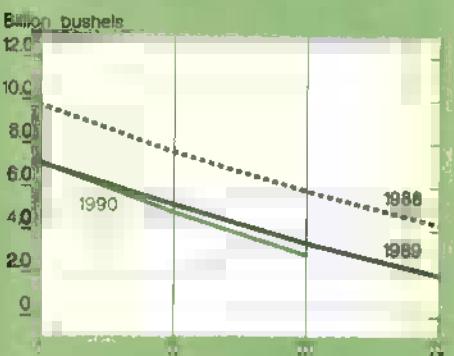
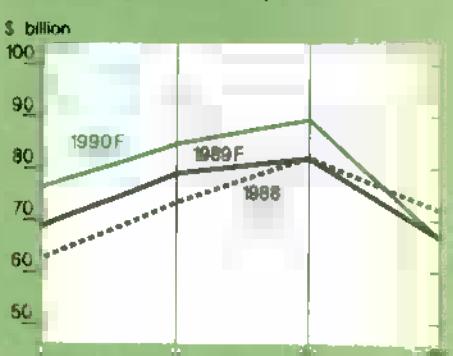
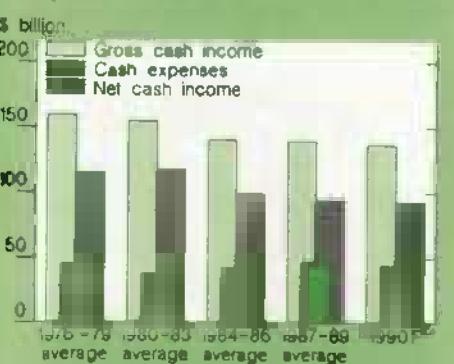
## Prime Indicators

## Agricultural Economy

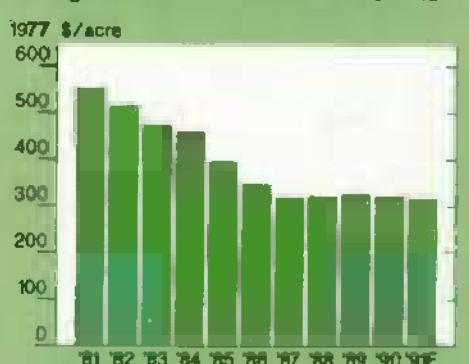
Index of prices paid by farmers

Index of prices received by farmers<sup>1</sup>

Ratio of prices received/prices paid

Total red meat & poultry production<sup>2</sup>Red meat & poultry consumption, per capita<sup>3</sup>Cash receipts from livestock & products<sup>4</sup>Corn beginning stocks<sup>5</sup>Corn disappearance<sup>6</sup>Cash receipts from crops<sup>4</sup>Real cash income<sup>5</sup>

Average real value of farm real estate



Farm value/retail food costs

<sup>1</sup>For all farm products. <sup>2</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts.<sup>3</sup>I=Dec.-Feb.; II=Mar.-May; III=June-Aug.; IV=Sept.-Nov.<sup>4</sup>Cash expenses plus net farm income minus gross farm income. <sup>5</sup>Retail weight. <sup>6</sup>Seasonally adjusted annual rate.

## Agricultural Economy

their corn into the ground quickly. Farmers' decisions to proceed with late corn were apparently based on expectations of strengthening corn prices and weakening soybean prices relative to benefits from the corn program. Ironically, farmers' decisions to plant less beans have now pushed up soybean futures prices.

Estimated corn area is still 220,000 acres below farmers' March intentions. However, some corn growers may have opted for the government's O/92 programs. Under these programs, farmers can put corn base acres into conserving uses and still collect 92 percent of their deficiency payments.

The weather hampered early soybean planting as well, but by the end of June, plantings lagged only in Kentucky and Missouri. Plantings were ahead of usual in Louisiana and the Carolinas.

But prospects of large Southern Hemisphere soybean crops likely made farmers leery of beans when deciding what to plant. In March, farmers said they planned to plant 2 percent fewer acres to soybeans than a year earlier, but the most recent acreage estimates suggest area is down about 4 percent.

### **Red Meat Output To Dip**

Tight hog and pork supplies pushed prices to record highs earlier this year. Declines later in the year will reflect seasonal increases in pork output. But even with very strong prices, higher feed costs will pressure producers' profit margins. This may explain why the fall pig crop is likely to expand only slightly from a year earlier.

Beef production is expected to be virtually flat this year. Cow slaughter is down, perhaps signaling the long-awaited upturn in the cattle cycle. Cattle prices, like hog prices, were very strong early in the year, but have slipped since April. Prices are expected to continue weakening through the summer, although upward pressure likely will develop in the fall.

Still, fourth-quarter cattle prices probably will be, at best, even with the first quarter, although a bit above a year earlier. With higher feed costs, cattle feeders' profit margins stand to drop as the year progresses.

Unlike red meat producers, poultry growers are rapidly expanding output. Broiler production is slated to jump about 7 percent in 1990. As a result, prices for the year likely will dip around 4 percent. And the higher feed costs also will crimp poultry growers' margins.

### **Cash Income Still To Grow**

Compared to the past 2 years, weather in the early part of the growing season has had less of an impact on the outlook. Farmers' net cash income, unadjusted for inflation, is still expected to float upwards by 2-9 percent this year. And net farm income probably will be about the same as last year. But, the stronger corn and bean prices have brightened income prospects for 1991.

Net cash income measures the value of commodity sales in a calendar year, plus government payments, less out-of-pocket expenses. In contrast, net farm income estimates the value of commodity production in a calendar year, plus government payments, less total costs.

Strong international and domestic demand for most U.S. agricultural products, combined with a tighter supply situation for wheat and coarse grains relative to a few years back, is behind the income strength. [Nathan Childs and Gregory Gajewski (202) 786-3313] **AO**

## **Livestock, Dairy, and Poultry Overview**

*Despite a profitable first half, breeding hog inventories are still below a year earlier. But a 1-percent increase in farrowing intentions, and more pigs per litter, likely will boost the fall pig crop and mean steady to slightly increased pork production in first-half 1991.*

*A decline in cow and heifer slaughter from a year earlier is a signal that the cattle herd expansion is continuing. Fed steer prices slipped from their April peaks through early July, but retail beef prices are not expected to follow until late summer or early fall.*

*With broiler production growth slowing, the 12-city broiler price is expected to remain near—or just above—a year earlier into early September. Per capita egg consumption is expected to decline slightly in 1990, and prices should average below last year's record.*

*Booming cheese sales have kept commercial use high and milk prices well above support levels.*

### **Breeding Herd Expanding?**

The hog breeding herd on June 1 totaled 7.2 million head, down 2 percent from a year earlier. However, producers plan to have about the same number of sows farrowing as a year earlier during June-August, and 2 percent more during September-November. The proportion of the breeding herd farrowing has trended upward in recent years.

After the extreme cold in December, generally favorable weather conditions reduced stress on young pigs. Fewer deaths resulted and pigs per litter reached record highs. If June intentions are realized, and litter rates remain high, the fall

pig crop likely will be 1 to 3 percent above a year earlier.

Barrow and gilt prices at the seven terminal markets averaged \$59 per cwt in the second quarter and peaked in May, a month earlier than usual. Prices are expected to remain in the high \$50's to low \$60's until pork production increases seasonally in late summer. Prices are expected to weaken to the low \$50's then, and remain there during the fourth quarter.

Retail pork prices reached a record \$2.18 per pound in June. Farm-to-wholesale price spreads have been squeezed during first-half 1990, an indicator of slim packer margins. Packers bid up prices for the reduced number of slaughter hogs. But low margins prompted some packers to curtail slaughter in June, weakening the hog market.

Retail prices are expected to remain high at least as long as wholesale prices discourage any significant featuring. Retail price declines generally lag both wholesale and farm price decreases.

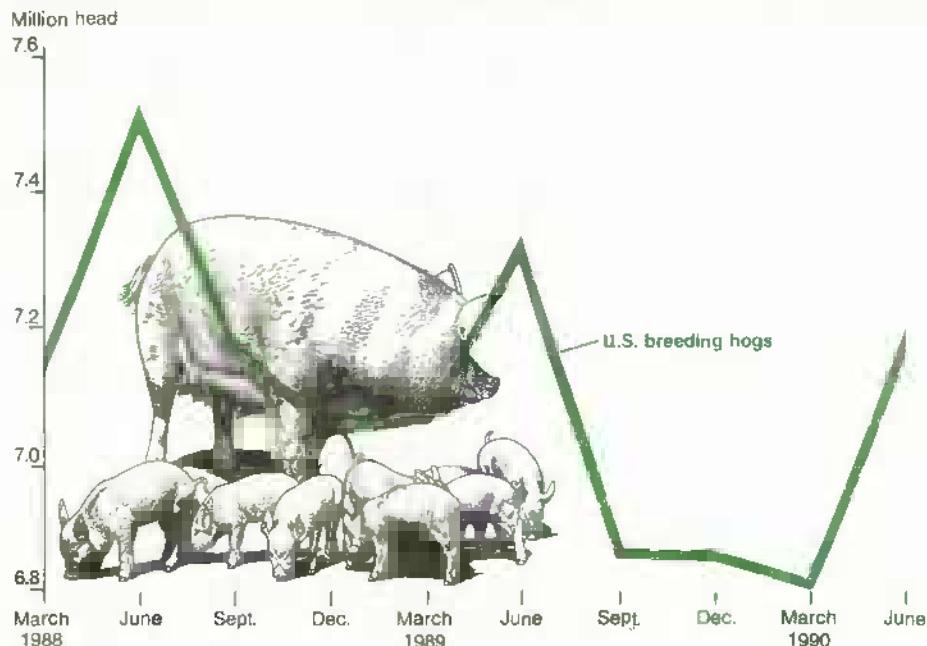
### **More Heifers For Breeding**

Cattle slaughter during first-half 1990 was about 1 percent below a year earlier. The slaughter mix included greater numbers of steers, up 1 percent from a year earlier, but 5-percent fewer cows and 2-percent fewer heifers.

Reduced cow and heifer slaughter indicates that cow-calf producers, as expected, are holding on to cows and retaining more heifers for breeding due to expectations of continued favorable profits over the next couple of years.

Beef production is little changed from a year earlier. The reduction in cow slaughter has been partly offset by expanded fed cattle marketings, so averaged dressed weights are up. Even though there will be more cattle on feed, beef production during the summer is expected to be about the same as a year earlier. Increased fed cattle marketings will continue to offset reduced cow slaughter.

### **Despite Seasonal Peaks, Hog Breeding Herd Has Trended Down**



Fed steer prices at Omaha peaked in April at around \$80 per cwt, but slipped below \$74 in early July. Although prices strengthened in mid-July, further price erosion is anticipated through mid-August if fed cattle marketings meet expectations.

The Choice retail beef price for June averaged a record \$2.89 per pound, up over 3 cents per pound from May. The farm-to-retail spread continued to widen in June to \$1.27 per pound, compared with \$1.11 in May and \$1.16 in June 1989.

Farm-to-retail Choice beef price spreads are not anticipated to narrow much until late summer or early fall when fed cattle marketings begin to decline and live prices begin to rise. Retail prices tend to lag farm prices, and so the spreads will narrow as the number of cattle available for slaughter declines seasonally.

### **Calf Slaughter Program Modified**

As of May 31, 1990, USDA's Food Safety and Inspection Service modified the voluntary young calf slaughter certification program for animals under 150

pounds or less than 3 weeks old. The still voluntary certification procedure now must identify all owners from birth to slaughter, so that any residue problems (e.g., Sulfonamide or other antibiotic) can be traced back to the source.

Certified calves that have received medications must be kept from slaughter until the prescribed withdrawal period has passed. Noncertified calves must go through a more rigorous inspection procedure than certified calves.

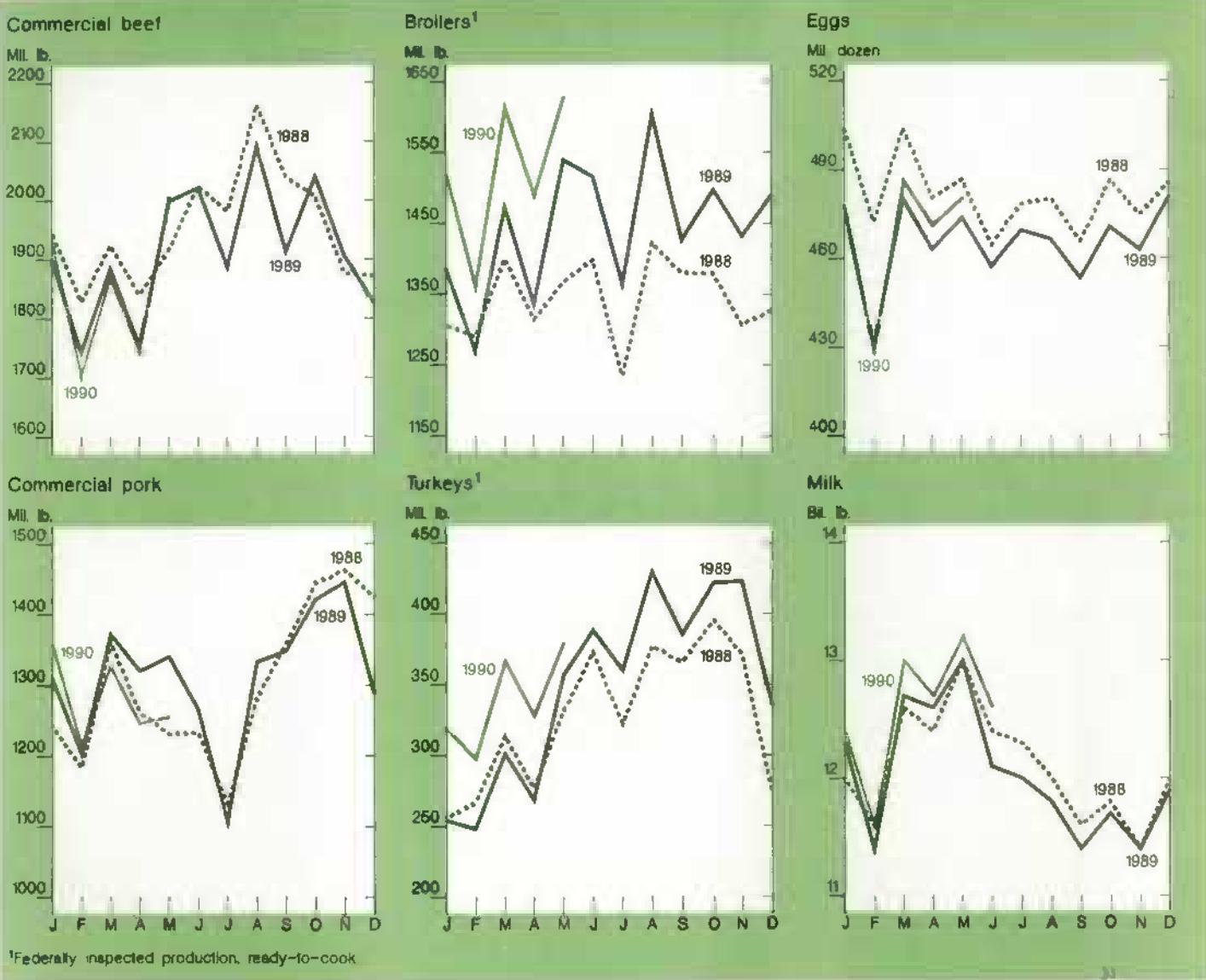
Total calf slaughter, which has been on a long-term downtrend, declined 15 percent to 914,000 head during the first 6 months of 1990. The certification program may have contributed to the sharp drop. Also, strong demand for lighter weight stocker-feeder cattle likely bid veal calves out of slaughter markets.

### **Broiler Prices Slightly Lower**

Third-quarter broiler production likely will expand about 6 percent from a year earlier. Chicks hatched in May and placements in June and July were up 5 to 6 percent from a year earlier.

## Agricultural Economy

## Livestock and Product Output



Fourth-quarter growth also stands to be around 6 percent and will reflect producer reactions to lower industry profitability earlier in the year. Second-quarter net returns to broiler producers averaged about 11 cents per pound, below the record of 17 cents a year earlier. Average net returns in the third quarter likely are 10-11 cents, about even with last year.

Broiler prices strengthened early in July, reflecting slower production growth, purchases for the Fourth of July, large exports, and high retail red meat prices. However, third-quarter prices likely are remaining about the same as a year earlier, and are expected to average 57-61 cents per pound. Prices are forecast to drop seasonally in the fourth quarter to

about 48-54 cents, compared with 50 cents a year earlier.

Retail broiler prices are expected to remain below a year earlier for 1990, and average 88-92 cents per pound. Third-quarter prices probably are dropping about 2 percent from a year earlier and will continue declining in the fourth quarter.

Third-quarter turkey production is expected to be increasing about 5 percent from a year earlier, substantially less than last year's 10-percent growth. Poultry placements have increased moderately in recent months and were up 2 percent in May from 1989. Fourth-quarter production likely will increase 3-4 percent.

Turkey stocks on June 1 were up 15 percent from 1989. Apparently, cut-up and further processing use did not fully absorb the large increase in production earlier this year. Eastern region wholesale hen prices are expected to be moving up slightly to 61-65 cents during the third quarter, compared with about 61 cents in the second, if slower production growth sufficiently offsets high stocks.

### Egg Output Rises

Second-quarter table egg production increased nearly 1 percent from a year earlier to 1.2 billion dozen, reflecting a slightly larger flock. Cumulative increases in flock size and chicks

hatched indicate that total egg production in 1990 will rise 1-2 percent from a year earlier.

The table egg-type flock size in early June was up fractionally from the previous month, and only slightly lower than a year earlier. However, the egg-type flock has considerable potential to expand in the fourth quarter. The hatch for the fall flock, based on the cumulative hatch 7 to 18 months earlier, stands to be 10-11 percent larger than a year ago. Third- and fourth-quarter table egg production probably will increase 1 and 2 percent from a year earlier.

The New York wholesale price for Grade A, large eggs is expected to average 71-75 cents per dozen for all of 1990, about 10 percent below last year's record. Second-quarter prices, at 75 cents, were nearly identical to a year earlier, as per capita consumption remained unchanged. But, third- and fourth-quarter prices are expected to fall to 61-67 cents, reflecting increased per capita supplies.

Retail prices for the second half are expected to decline from over \$1.00 a year earlier to around 85 cents per dozen. For the year, retail prices likely will average in the mid-90's, down from \$1.00 in 1989. Per capita consumption is estimated to be around 235 eggs, one below 1989.

## Milk Prices Still Rising

Booming cheese sales kept milk and dairy product prices high during the second quarter of 1990. Commercial use of cheese and inventory building by nonfat dry milk users more than offset the 2-percent rise in milk production and the loss of commercial exports of nonfat dry milk.

Wholesale prices of cheese and nonfat dry milk have risen substantially since early February, and were far above support levels during the seasonal production peak. In early July, American cheese prices were up 15 percent from the February low and 30 percent above the support price.

Similarly, the central states' price of nonfat dry milk was 50 percent higher than

the support price. Early July butter prices were slightly above the support price, except in the West.

High wholesale prices resulted in record farm milk prices this spring. Farmers received an April-June average of \$13.50 per cwt, up more than \$1 from a year earlier. The Minnesota-Wisconsin price of manufacturing grade milk averaged almost \$3 per cwt above the support price.

Additional price rises are expected to be modest. Summer milk production is likely to post large gains from a year ago, and pipeline stocks of cheese and nonfat dry milk are believed to be large. On the other hand, significant price declines are unlikely, except possibly for nonfat dry milk. Strong cheese sales probably will continue supporting dairy markets.

**For further information, contact:** Ken Nelson, coordinator; John Ginzel, cattle; Leland Southard, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; Sara Short and Jim Miller, dairy. All are at (202) 786-1285. AO

## Field Crops Overview

*Global rice production is forecast to hold steady in 1990/91—India and China probably will bring in near-record crops. World trade is forecast up slightly, although U.S. exports likely will slip a bit.*

*Global oilseed output is expected to rise 4 percent to a record 221 million tons. EC production stands to gain 15 percent from 1989/90, after 2 years of declines. South American output is expected up as well, but only by about 4 percent.*

*A wet spring that delayed plantings and helped hold down area modestly lowered forecasts of U.S. coarse grain, soybean, and winter wheat output in 1990/91. Still, the total U.S. wheat crop likely will be up 33 percent from a year earlier, while coarse grain production will rise by a more modest 3 percent.*

*With prospects for a larger foreign crop and high world corn prices, U.S. farmers planted less soybeans, and output is forecast down 3 percent from a year earlier. Soybean exports are likely to fall only 1 percent.*

## Wheat Stocks Larger Than Expected

A change in the feed and residual use estimate for the 1989/90 U.S. wheat crop eased the estimated wheat supply situation somewhat for the 1990/91 crop year. Specifically, a drop of 83 million bushels (37 percent) in the 1989/90 feed and residual use estimate means that total domestic use was about the same as a year earlier.

The new estimate, in turn, raised 1989/90 U.S. ending stocks to 535 million bushels and helped to increase forecast 1990/91 wheat supplies to over 3.2 billion bushels. This will be modestly bearish for average farm prices, now forecast to be \$2.80-\$3.20 for the 1990/91 crop year. That's compared with \$3.72 a year earlier.

## Corn-to-Soybean Shift Below Expectations

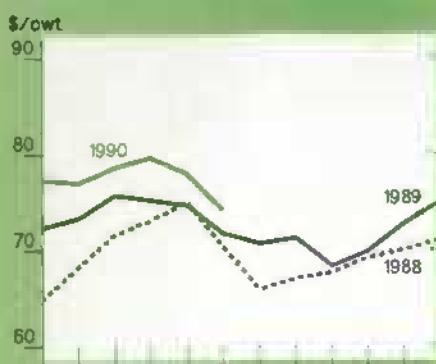
The planting survey in June showed that, although wet fields prevented some corn planting in Illinois and Missouri, farmers in other major corn states, including Ohio and Iowa, exceeded their earlier intentions. In total, the survey shows corn area up over 2.3 million acres from the 1989 crop—higher than many had projected. Area planted to sorghum, barley, and oats was below earlier indications.

The wet weather that delayed corn plantings in late May and early June had raised speculation that soybean plantings would rise. Instead, corn plantings jumped from 81 percent complete on May 30, compared to the 94-percent

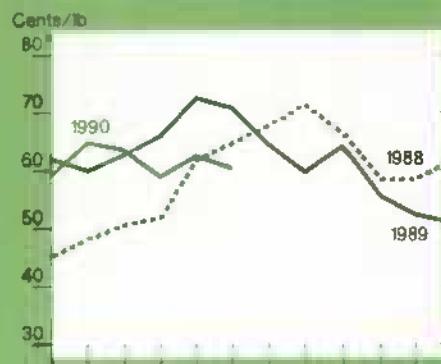
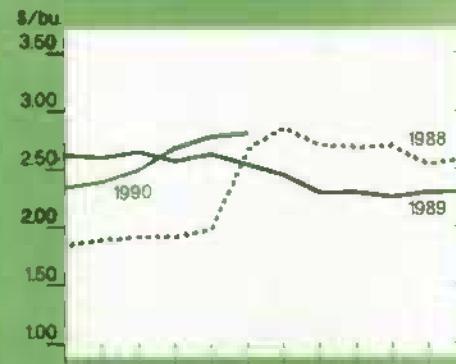
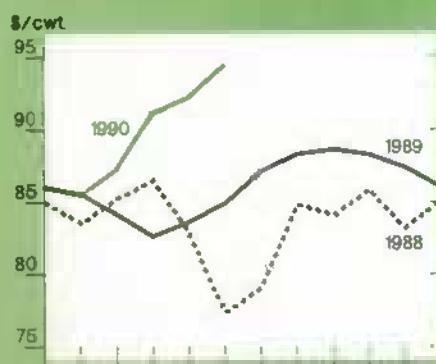
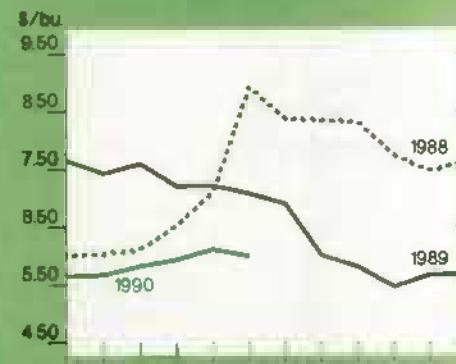
## Agricultural Economy

## Commodity Market Prices

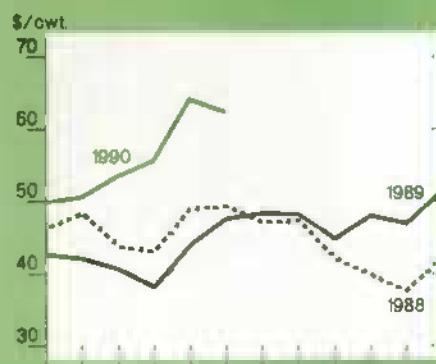
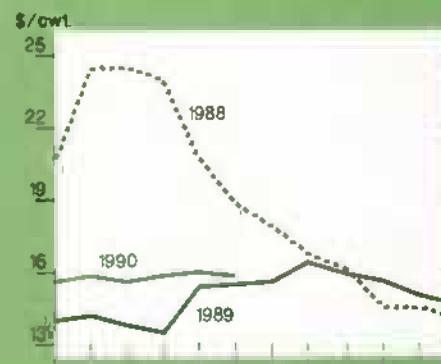
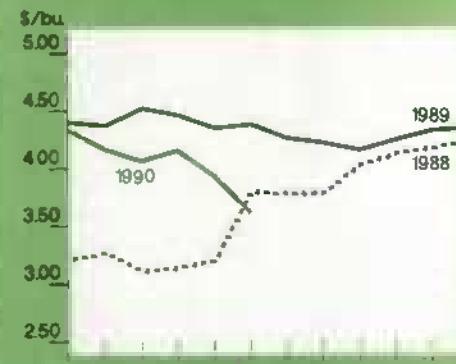
Choice steers, Omaha



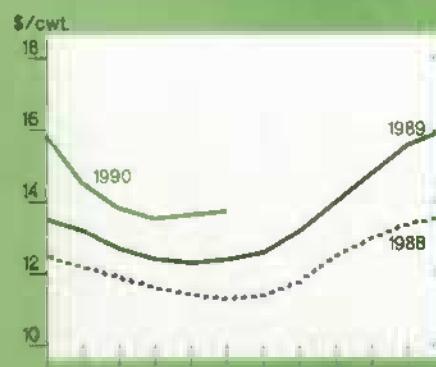
Broilers, 12-city average

Corn, Chicago<sup>3</sup>Feeder cattle, Kansas City<sup>1</sup>Eggs, New York<sup>2</sup>Soybeans, Chicago<sup>4</sup>

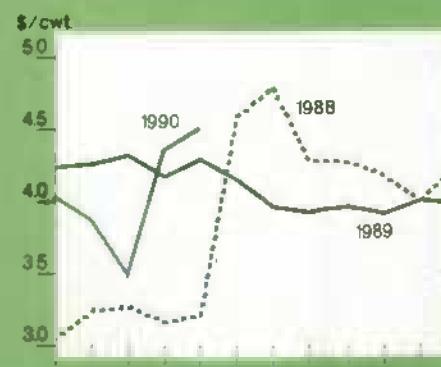
Barrows and gilts, 7 markets

Milled Rice, SW Louisiana<sup>5</sup>Wheat, Kansas City<sup>6</sup>

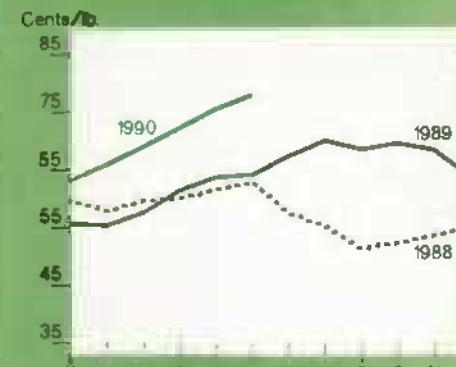
All milk



Sorghum, Kansas City



Cotton, average spot market

<sup>1</sup>600-700 lbs., medium no. 2. <sup>2</sup>Grade A large. <sup>3</sup>No. 2 yellow. <sup>4</sup>No. 1 yellow. <sup>5</sup>U.S. No. 2 long-grain. <sup>6</sup>No. 1 HRW.

## Agricultural Economy

### World Soybean Exports, Stocks Will Be Almost Flat

	1988/89	1989/90	1990/91
	<i>Million metric tons</i>		
<b>WORLD</b>			
Wheat			
Production	501	535	572
Use	531	536	558
Exports	97	97	102
Ending stocks	117	116	129
Corn			
Production	400	460	472
Use	459	478	478
Exports	64	73	67
Ending stocks	87	69	64
Soybeans			
Production	95	106	107
Use	98	103	107
Exports	23	26	26
Ending stocks	18	19	19
<b>UNITED STATES</b>			
Wheat			
Production	49	55	73
Use	27	26	32
Exports	38	34	34
Ending stocks	19	15	22
Corn			
Production	125	191	199
Use	133	148	149
Exports	51	60	55
Ending stocks	49	32	29
Soybeans			
Production	42	52	51
Use	31	33	34
Exports	14	17	17
Ending stocks	5	7	7

**Notes:** Exports of wheat and corn do not include intra-EC trade shipments. Data are for marketing years. The wheat marketing year is July/June, and the soybean and corn marketing years are October/September.

norm, to 97 percent complete by June 17, versus the 99-percent norm. The sharp rise in plantings in such a short time illustrates how quickly producers can respond to changes in weather conditions. Weather was more favorable for planting in the first 3 weeks of June.

As farmers continued to plant corn well into June, many switched to short season (90-day) corn, which typically has a yield somewhat lower than longer season varieties. This, in combination with a somewhat reduced anticipated corn area from the March intentions and poor weather and soil conditions in some small pockets, led to a 250-million-

bushel reduction in the production forecast for the 1990/91 crop year.

In stark contrast to the revised wheat estimates, corn ending stocks are very tight, causing an increase in the expected average farm price for the year. At \$2.50-\$2.90 for the 1990/91 crop year, they are anticipated to be well above last year.

Soybean prices were \$5.70-\$5.90 per bushel in the spring, except for a brief rally in early May, and were not as attractive as corn's target price during the planting season. Corn and soybean price considerations probably outweighed yield concerns as producers went ahead with corn plantings despite the delay.

Nonetheless, a late June rally that pushed bean prices above \$6.00 could have sparked some late soybean plantings. Since plantings ended, bean prices have been hovering around \$6.00.

The reduced soybean area (58 million acres in 1990/91 compared with 60.7 million a year earlier) and less-than-ideal weather and soil conditions have led to a reduction in the anticipated 1990/91 outturn. This year's crop is forecast to be 1,860 million bushels, down 65 million from the previous estimate, and down about the same from last year's crop.

Two minor changes boosted the soybean use forecast for 1989/90. Crushings have been revised up 10 million bushels to 1,120 million, and modestly stronger foreign sales have raised the export forecast by a similar 10 million bushels to reach 620 million bushels. Higher use pushed down estimates of 1990/91 beginning stocks.

Reduced beginning stocks have tightened the prospective 1990/91 soybean supply situation. Ending stocks, which had been expected to show some growth and approach more normal levels again, are now forecast to fall to 265 million bushels, 10 million less than 1989/90. As a result, average farm prices for 1990/91 are forecast to be \$5.50-\$6.75, up about 10 percent from the month-earlier forecast.

### Rice Competition Stiffens

Foreign rice output in 1990/91 is projected to nearly match the 1989/90 record. Assuming normal weather, India and China, which together account for 56 percent of world production, should produce near-record crops.

Strong production prospects in Asia are likely to hold down gains in global imports in calendar 1991. World trade is projected to be 13 million tons, slightly above 1990.

Export prices have been falling in recent months, and are likely to lead to lower rice plantings in Thailand. But higher

## Agricultural Economy

yields there are expected to maintain production. Thai exports are projected to be 4.5 million tons in calendar 1991, up 13 percent from this year. Nonetheless, the Thai market share still will be sharply below 1989's 40 percent. Vietnam's booming exports are the main reason for the lower share (see Vietnam rice spotlight).

U.S. exports in calendar 1991 are projected to be 2.4 million tons, marginally below 1990. Many traditional U.S. markets, including the EC, some Middle Eastern countries, and South Africa, are projected to maintain imports at 1990 levels. Steady exports to these and other markets will allow the U.S. to hold about 18 percent of the world market.

### **EC Oilseed Output To Jump**

World oilseed production is forecast to be a record 221 million tons in 1990/91, 4 percent above 1989/90. The soybean crop could reach a record 107 million tons, but flaxseed, sunflowerseed, and rapeseed will increase the fastest in percentage terms.

After 2 years of declines, EC oilseed production will be up sharply. Excellent weather for rapeseed sowing last fall and dry 1990 spring conditions, which

shifted corn area to sunflowerseeds, underlie a forecast 15-percent rise in production to a record 12.7 million tons.

Soybean production in Argentina, Brazil, and Paraguay is forecast to post another record and reach 33.1 million tons in 1990/91, up 5 percent from a year earlier. Economic instability and lower bean prices relative to other crops have slowed recent year-to-year growth significantly.

Growth in world soybean and meal trade will slow in 1990/91 after rebounding a year earlier when the U.S. and Argentine crops recovered from the 1988 drought. World soybean trade is forecast to be 26 million tons, only slightly above shipments in 1989/90. Soybean meal trade of 27 million tons is expected to be 3 percent over the previous year.

EC import demand will shift away from soybeans towards meal. The expected rise in oilseed output there will pressure crush margins and provide an adequate supply of domestically produced vegetable oils.

Demand for soybean meal in the USSR and Eastern Europe is the key to world soybean meal trade in 1990/91. They are the second and third largest soybean meal importers, and both have large protein deficits. However, ongoing political

and economic uncertainties stand to restrict imports to 1989/90 levels.

A tighter U.S. supply situation, larger supplies in South America, and slow growth in foreign soybean meal consumption will restrict gains in U.S. exports. In 1990/91, soybean exports are forecast down slightly from a year earlier. Soybean meal exports are forecast up 12 percent to 4.9 million tons. These forecasts are well below the volume prior to the 1988 drought as the long-term downtrend in U.S. market share continues.

### **World Cotton Supplies Continue Tight**

World cotton output in 1990/91 is projected up 9 percent to 86.6 million bales. For the U.S., dry weather in the southwest has diminished production prospects, but the crop still will be up by about a fourth from 1989/90. Production gains are forecast for China, Pakistan, Brazil, Mexico, and Egypt.

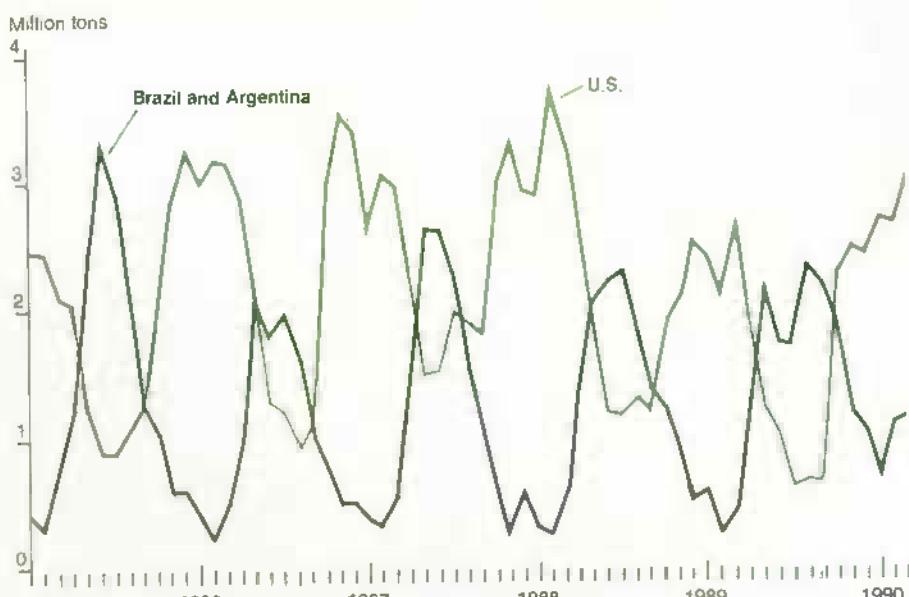
Another large crop is likely in India and Turkey as well, but the Soviet crop should be smaller because the 1990 plan calls for less planted area.

Current high prices, if continued, are expected to mean another large crop in Australia, Argentina, and Paraguay, although planting there will not begin for several months.

Global consumption in 1990/91 is forecast to exceed production again, so cotton stocks will continue to tighten. Consumption growth is likely to remain strong among major producing countries. Continued rapid demand growth is forecast for China and Pakistan, as well as Thailand and Indonesia. Slower consumption growth is expected in India after the big increase in 1989/90.

In contrast to the major producing countries, overall use will remain stagnant among traditional importers—Europe, Japan, South Korea, Taiwan, and Hong Kong—reflecting high prices. These factors will hold world trade close to 1989/90's 25 million bales.

**U.S. Soybean and Meal Exports Rise As South America's Lag**



## Agricultural Economy

For the U.S., the combination of tight domestic supplies, larger competitor crops, and flat world trade will mean lower exports compared with a year earlier. But continued strong domestic use by competitors will limit their export gains. So, U.S. exports and market share will remain larger than in most recent years. [Jim Cole (202) 786-1840 and Frederic Surls (202) 786-1824]

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir and Jim Cole, domestic feed grains; Robert Cummings, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Scott Sanford, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840. **AC**

## Specialty Crops Overview

*U.S. potato acreage likely expanded 6 percent in 1990 from a year earlier, largely in response to higher prices during the last 2 years.*

*The California orange crop is larger than expected and grower prices have declined. Among noncitrus fruits, U.S. output of peaches, plums, and cherries is expected to drop in 1990, while production of pears, nectarines, apricots, and almonds should rise.*

*Although domestic cigarette consumption continues to decline, export demand for U.S. tobacco leaf remained strong in 1989/90 (July-June), especially among newer Asian markets.*

### Potato Acreage & Output Expand

Potato growers have responded to 2 years of high prices by planting 6 percent more area in 1990 than a year earlier. Acreage for fall harvest, normally

accounting for over 80 percent of U.S. production, also jumped 6 percent from last season and 7 percent above 1988 to about 1.2 million acres. Combined area for the winter, spring, and summer crops is estimated to be around 1.4 million acres.

Growers in Idaho and Washington, the two largest producing states, planted 11 and 9 percent more fall potatoes than a year earlier. Producers in the western potato states increased area by 9 percent. The western states' acreage is heavily concentrated in varieties used for frozen and dehydrated products. Also, many of the russet potatoes that frequently are used as fresh baking potatoes are produced in the western states.

Producers in the central states increased planted area for fall potatoes by 2 percent. The largest increases were in North Dakota, Minnesota, and Michigan where red and round white potatoes are the most often planted types. Eastern producers boosted planted area slightly. Production there is heavily concentrated among the round white varieties that are typically grown for fresh use and processing into chips.

Growers in some areas received record-high prices during April and May. Average prices for the past two seasons have been above trend, reflecting moderate-sized crops coupled with expanding demand.

Summer potato production is estimated to be 25 million cwt, up 13 percent from 1989. If yields from the fall crop equal the average for the past 5 years (297 cwt per planted acre), fall production would tally 346 million cwt, and output for all four seasons would approach 397 million. Total output was 370 million cwt in 1989 and 356 million in 1988.

Low yields associated with summer droughts in the Red River Valley of Minnesota and North Dakota during the past 2 years have pulled down the U.S. average. But, as of mid-July, topsoil moisture conditions there were favorable. Production shortfalls in the valley contributed to the high grower prices of the past two seasons.

If total production reaches 397 million cwt, prices likely will retreat from the lofty heights of the 1989/90 marketing season. Prices typically decline about 4 percent for each 1-percent increase in production. But this rule of thumb may not hold, depending on demand and fresh and processed potato stocks at the beginning of the fall season. Warehouse stocks of frozen potatoes on June 1 were 7 percent higher than a year earlier.

### More California Oranges

The California orange crop has turned out to be larger than previously expected. In July, the navel orange crop was forecast to be about 1.7 million short tons, up 7 percent from May's already record prospects. And the July forecast for California valencias was raised 7 percent from May's 1 million short tons.

The larger navel crop estimates put downward pressure on grower prices, which had reached uncommonly high levels earlier this year. The price strength reflected supply shortfalls in Florida and strong export demand.

The July forecast for 1989/90 grapefruit output rose marginally from May, but is down 31 percent from a year earlier. California and Arizona growers benefited from strong prices caused by the Florida and Texas freezes.

The July forecast for the 1990 peach crop placed total U.S. production at 2.1 billion pounds, down 9 percent from last season and 19 percent below 1988. A March freeze lowered freestone output in South Carolina and New Jersey. California's clingstone production is forecast up 1 percent from a year earlier. Grower prices for peaches in June were ahead of a year earlier.

Heavy rains in California and Washington over the Memorial Day weekend caused sweet cherries to split on the trees, rendering them useless for commercial sale. Consequently, production in 6 western states (California, Idaho, Montana, Oregon, Utah, and Washington) is expected to be 40 percent below a year earlier. And the forecast for California plum output is 1 percent lower than last

## Agricultural Economy

season. Crop quality is excellent, despite variations in fruit size.

Bartlett pear output is forecast up 4 percent from a year earlier and 8 percent larger than 1988. Continuing strong demand and firm wholesale prices for canned pears should provide the basis for strong grower prices this season. Good sizes and excellent quality describe the 1990 California nectarine crop, forecast up 3 percent from the past two seasons. Apricot production is forecast up 4 percent from last season.

California's 1990 almond output is forecast at a near record 655 million pounds (shelled basis), up 34 percent from a year earlier, and 1 percent less than 1987's record. More output likely will further depress already-weakened market prices.

However, an unusually warm winter followed by subfreezing temperatures in March and April sharply cut prospects for Spain's 1990 almond crop. This should help U.S. almond exports. At the end of April, U.S. almond exports for the 1989/90 season were 16 percent above a year ago.

### Tobacco Leaf Exports Continue Strong

Export demand for U.S. tobacco leaf in 1989/90 (July-June) remained relatively strong because foreign cigarette manufacturers are blending high-quality U.S. flue-cured and burley tobacco with domestic or other imported tobacco to improve quality.

Lower prices in recent years and increased cigarette consumption in developing countries also is boosting demand for U.S. tobacco. U.S. exports for the year ending June 30, 1990, likely ranged from 480 to 490 million pounds, about the same as a year earlier.

U.S. tobacco markets may be shifting from Europe to Asia as demand grows in developing countries, while many developed countries take steps to reduce tobacco consumption. Asian countries imported more U.S. unmanufactured leaf during July 1989-March 1990, while the EC took less.

Declining U.S. cigarette consumption continues to erode domestic demand for tobacco. U.S. cigarette consumption during 1989/90 declined an estimated 4.5 percent from a year earlier. The drop was partly due to higher prices caused by increased manufacturers' charges and higher excise taxes in many states.

But, adverse health effects, heightened antismoking activity, an increase in the number and stringency of smoking restrictions, and declining social acceptance of cigarette smoking also reduced demand. Domestic cigarette use is expected to continue dropping in the coming year. [Glenn Zupp (202) 786-1883]

For further information, contact: Kate Buckley, fruit; Gary Lucier, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture. All are at (202) 786-1883. AD

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## Commodity Spotlight

### Vietnam Exports Rice Again

After years of economic stagnation, Vietnam is following China's path of economic liberalization. But also like China, Vietnam has been unwilling to loosen its political control. Nonetheless, economic liberalization has affected the rice sector most dramatically. After instituting new reforms in 1988, Vietnam quickly shifted from being a major rice importer to the world's third largest exporter.

The policies that Vietnam has introduced are similar to reforms begun in China in 1978 that led to phenomenal growth in agricultural production there. If Vietnam repeats the pattern, its production and export supplies likely will continue to expand in the long run, making it a major player in the world's rice market after a near 30-year hiatus.

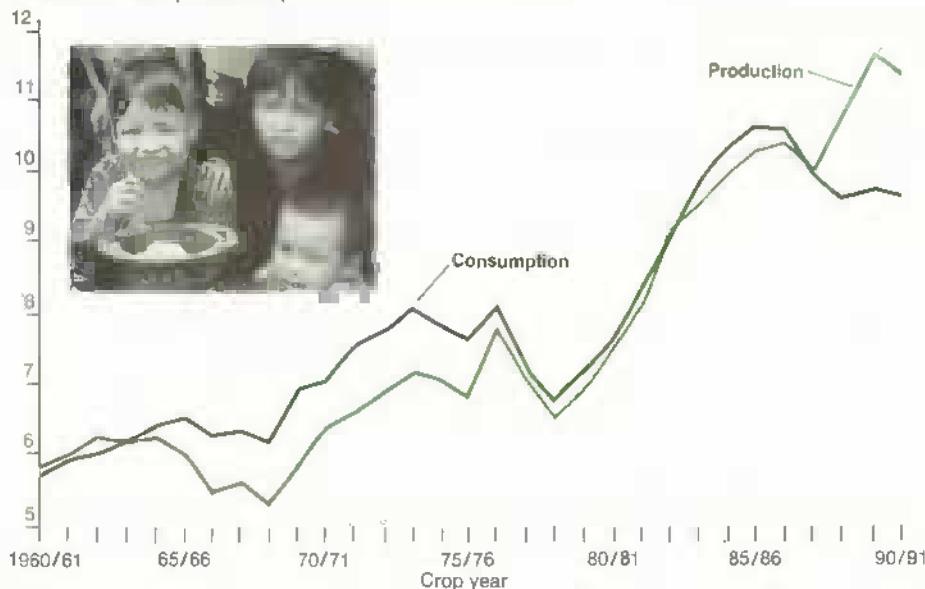
But in 1991, Vietnam's rice exports are forecast to slip by as much as 15 percent because Thailand will be scrambling to regain lost market share. And Vietnam's output probably will drop slightly in



## Commodity Spotlight

### Rice Production Outstrips Consumption in Vietnam

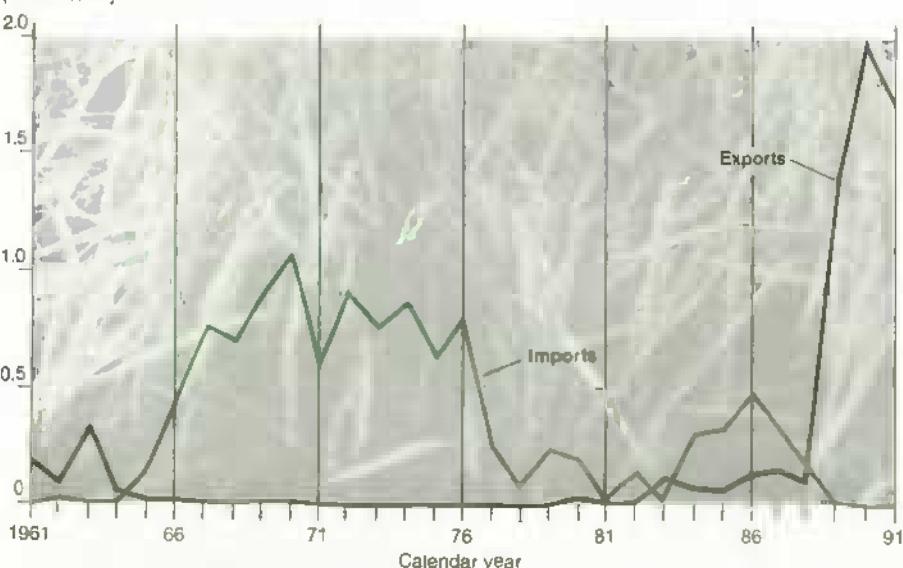
Million metric tons (milled basis)



1989/90 forecast, 1990/91 projected.

### Vietnam's Rice Exports Surge, Imports Plummet

Million metric tons  
(milled basis)



1990 forecast, 1991 projected.

1990/91. This output forecast assumes normal weather for the season, following 2 years when very good weather boosted yields.

### War & Policy Stifled Exports

Vietnam was a leading rice exporter before World War II and remained a net exporter through 1963. But its position shifted during the Vietnam war. Viet-

nam imported as much as 1 million tons a year at the height of the war and averaged 230,000 tons per year between 1981 and 1988. But exports averaged only 85,000 tons annually between 1981 and 1988.

Rice shortages continued after the war ended in 1975. The government created agricultural collectives in the southern provinces, Vietnam's most productive rice region. Land and all privately owned capital assets were redistributed; planting and marketing decisions were centrally planned. And production plummeted due to a lack of incentives and shortages of inputs.

In an attempt to rejuvenate production in 1981, the government introduced a contract system. Farmers were allowed to contract with their cooperative to supply a fixed amount of grain and, in turn, were allowed to retain any surplus production for home use or sale in the private sector. As a result, after a decade of stagnation, production rose an average 4 percent a year between 1980 and 1988.

However, many problems persisted. Because land was assigned to farmers by provincial officials and assignments could change each year, farmers had little incentive to invest in land improvements. And the contract system still forced farmers to turn over a large share of their crops to the state.

Land use, cropping patterns, and marketing of most of the crop were still controlled by the government. But, the government frequently could not supply farmers with sufficient inputs in a timely fashion, or pay for the rice at harvest.

### Rice Sector Liberalized

In 1987/88, Vietnam's rice production fell, barely meeting consumption needs and prompting the government to institute new policies. The reforms allowed individuals and their families to lease land for 10 to 25 years, thus giving farmers enough security to invest in land improvements necessary to boost production. In addition, farmers could now market their own grain rather than sell it to

## Commodity Spotlight

the government, although they still had to pay land taxes in grain.

The input distribution system also changed, allowing provincial rather than central authorities to distribute inputs. Those who could afford to were allowed to buy inputs from the private sector, and private ownership of equipment and draft animals was permitted.

In addition, the government stopped providing subsidized rice to civil servants and the military according to their rank and family size. Government employees had been hoarding surpluses, selling them on the black market, and using rice as animal feed.

In 1989, when the consumer subsidies stopped and farmers and traders were allowed to sell their rice at market prices, the hoarding and waste appeared to stop. Domestic rice consumption seems to have declined, probably reflecting a reduction in its use as feed.

In 1988/89, the policy changes and favorable weather led to a 10-percent production increase, reduced hoarding and waste, and, for the first time since 1963, an exportable surplus. In calendar 1989, Vietnam unexpectedly burst back into the world's rice market, exporting 1.4 million tons and capturing 9 percent of the world market.

Production in 1989/90 is forecast to rise 7 percent to a record 11.7 million tons (milled). Vietnam's exports in calendar 1990 are projected to expand to 2 million tons, with its market share increasing to 16 percent, largely at Thailand's expense.

### **More Reforms Are Needed**

Despite Vietnam's moves to liberalize so far, many obstacles to further growth remain. For example, land use and crop decisions continue to be made by government and cooperative officials rather than farmers. And farmers can grow other crops only after they have paid their taxes in grain.

Furthermore, input prices, especially for fertilizer, are relatively high while rice

prices are relatively low, partly because fertilizer imports and rice exports remain under tight government control.

In addition, while farmers can buy inputs (other than land), equipment, and animals in the private sector, there is no credit system to help them finance their purchases. And because there has been little public or private investment in infrastructure since the war, roads and irrigation facilities are inadequate.

Nevertheless, Vietnam's recent export performance appears to be more than a short-term phenomenon. The country's ability to procure, mill, load, and ship rice in a timely manner indicates that it has the organizational capacity to remain a major rice exporter.

Vietnam is currently an important player in the low quality market. In 1989, it made inroads into some of Thailand's low quality markets in Africa and Asia by undercutting Thai prices. This year, Vietnam is again successfully challenging Thailand, Pakistan, and Burma for the low quality markets in Africa and Asia.

However, Vietnam is improving its milling capacity and several new mills equipped by the Japanese are expected to come on line within the next year. Recent sales to higher quality buyers, such as Iran, reflect the improvements in milling and handling that have been made so far.

In addition, Vietnam reportedly has expanded sales into the Middle East and even Latin America, where the U.S. was the dominant supplier in 1989. Further economic liberalization and development of Vietnam's infrastructure are likely to lead to increased production, a more efficient domestic market, and a continuing strong presence in the world rice market.  
*(Sara Schwartz (202) 786-1820)* AO

## **"Big Green" Would Pressure Growers**

**C**alifornia voters will set public policy on farmers' use of many pesticides this November by voting on the "Big Green" initiative. If Big Green passes, some estimates indicate that 70 percent of the pesticides now used in the state stand to be eliminated.

For fruit and vegetable growers, however, pesticide choices are already shrinking because of the 1988 amendments to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The amendments shifted the costs of pesticide registrations from the EPA to the chemical companies.

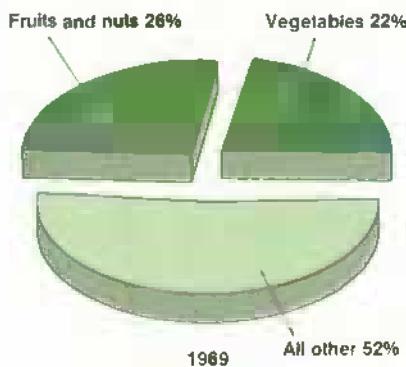
Even though fruits and vegetables are a major component of California's agricultural industry, they are considered minor-use commodities when chemical companies think about paying for new pesticide registrations. Moreover, registration fees and the costs of required safety studies are rising.

So, because Big Green would ban the use of chemicals that are suspected of being carcinogenic or reproductively toxic, fruit and vegetable farmers may be left out in the cold if the initiative becomes law. Because of high research and development costs, along with higher registration fees, manufacturers would be less likely to develop new chemical alternatives for one state.

While growers are always looking for alternatives to chemicals, Integrated Pest Management (IPM) has not advanced to where it is a panacea for total pest control. Ironically, without IPM alternatives, the loss of many pesticides stands to force growers into using the remaining pesticides more intensively. Some growers will weigh shifting to another state.

## Commodity Spotlight

Fruits, Nuts, and Vegetables Provide Nearly Half of California's Agricultural Receipts



California is the major supplier of fruits and vegetables to the U.S. and, in some cases, the world. In 1989, California fruit, nut, and vegetable receipts, worth \$8.5 billion, were 41 percent of the U.S. total. The fruit, nut, and vegetable industry generates the most revenue and jobs of all of California's agricultural sectors. Moreover, California has the most diversified fruit and vegetable industry of any state.

However, during the 1980's, Californians saw 4 consecutive years of below-normal rainfall, soaring land prices, and reforms in labor laws. Alone, any one of these events would have strained local growers. Yet these changes may not reshape the industry as much as the Big Green initiative.

### **Why California And Big Green?**

The formal name for Big Green is the California Environmental Protection Act of 1990 (CEPA). The initiative has provisions for ozone depletion, offshore oil drilling and oil spills, and air pollution.

Of particular interest to the fruit and vegetable industry is a title that would specifically remove, over the next 2-8 years, any chemical for use on food that contains a suspected carcinogenic or reproductively toxic active ingredient regardless of how much risk it poses. Big Green would eventually ban any

chemical fitting these criteria without regard to its economic benefit.

For the first time, a state government would require companies to examine the safety of inert ingredients.

Because California is the major U.S. fruit and vegetable producer, widespread pesticide bans would affect quality, production, and prices. So a local coalition of farm groups, retailers, and distributors, called Californians for Responsible Food Laws (CAREFUL), proposed a counter initiative titled the Consumer Pesticide Enforcement Act of 1990 (see box).

The CAREFUL initiative was designed to address only those parts of Big Green dealing with food and farm worker safety. If both initiatives pass, the one with the most votes will supersede the sections in the other dealing with food and farm worker safety.

### **What Would It Mean?**

It is not fully clear what Big Green would mean to California producers and processors. Most experts say that yields and quality would drop due to changes in production practices, changes in when crops are grown, and shifts in producing areas. These would lead to changes in processing economies, and ultimately increases in retail fruit and vegetable prices. Also, California's share of world markets would drop and trade flows would be disrupted.

California's two major vegetable crops are lettuce and processing tomatoes, which together accounted for 44 percent of the state's 1989 vegetable receipts and 15 percent of U.S. vegetable receipts. Lettuce is grown year round in California, shifting between regions as the climate dictates. Processing tomatoes are concentrated in the Sacramento and San Joaquin Valleys.

Speculation about the physical and economic losses have been publicized. A USDA researcher has estimated that the loss of fungicides and insecticides on lettuce and tomatoes would cut yields 50-60 percent and boost consumer costs.

Others believe that the output of several important fruits and vegetables would drop about 28 percent and that prices would go up 50 percent. These estimates come from economic models and industry consensus rather than historical evidence.

### **Can California Adapt?**

There are alternatives to conventional production practices for fruits and vegetables. But to meet the proposed 2- to 8-year ban, research and development of alternatives would have to accelerate. Some cultural and biological controls are available to growers, and are part of standard farming practices. However, other nonchemical controls are not now widely used for certain crops because they are more costly than chemicals.

California growers continue to fund IPM, weed management, and rootstock research that will cut chemical dependence. Through state research programs, California agriculture spent over \$1 million on these areas. The commitment to change practices is evident at the federal, state, and grower level.

The California processing tomato industry makes extensive use of crop rotations and biological controls such as *Bacillus Thuringiensis* (BT). According to a California Tomato Growers Association survey, extensive research and information on IPM for processing tomatoes prompted farmers to use significantly fewer pesticides in the 1986 growing season than was indicated by the 1987 National Academy of Sciences report assessing pesticide risk on tomatoes.

Yet, the Big Green ban may eliminate some pesticides that are key to effective IPM. If so, farmers' use of approved chemicals likely would go up, and product quality would suffer.

The effectiveness of alternatives for California's fruit and vegetable production will depend on: what chemicals are left or are granted an extension due to the lack of alternatives, the relative importance of crops, and the regions and season the crops are produced. Big Green stipulates that if there are no alternatives or if severe economic hardship will

## Commodity Spotlight

ensue, a pesticide may have a 3-year extension, though use must average 10 percent less each year.

Less important fruits and vegetables—like melons and specialty or exotic produce—which do not command a diversity in pesticide registrations, will feel the withdrawal more severely. They also are the group that has received the least research on alternative production practices.

Also, the Imperial Valley Vegetable Growers Association claims that its crops would be devastated by Big Green because the area has a high weed and insect population with few natural barriers. The Imperial Valley is the major producing region in the winter. Since there are few other U.S. vegetable areas active in the winter, shipments from abroad likely would be needed to meet seasonal demand.

### *Change Will Come Anyway*

Whether Big Green or the CAREFUL initiative passes on November 6, chemical availability probably will decline in the 1990's. Initially, fruit and vegetable growers likely will face higher production costs and consumers will see higher prices, lower quality, and tighter supplies as chemicals are removed from use in California.

Higher prices likely will encourage fruit and vegetable production in other states and countries. During the 1980's, rising demand for a year-round supply of fruit and vegetables sent many U.S. growers and processors to other states, notably Arizona, and abroad. But the bulk of the produce coming from states other than California initially would cost consumers more.

Big Green also has titles dealing with degradation of the ozone layer and air pollution. Implementation of these titles would push up operating costs for California's processors, making it questionable whether certain processors would be able to stay in business there.

### *Big Green Versus CAREFUL*

#### **The California Environmental Protection Act of 1990 (CEPA)**

Title 3 of the Act would mandate:

- Canceling registration for any pesticide containing an ingredient known to cause cancer or reproductive harm in laboratory animals which is registered for use on food, or for which a tolerance exists.
- A ban on new pesticide registrations and inert ingredients that are carcinogens or known to cause reproductive harm in laboratory animals.
- A possible 3-year extension for pesticides whose loss would cause severe hardship on agriculture, or for which no known alternative control is available. However, the quantity used would have to average 10 percent less each year.
- That pesticide manufacturers have health effects studies intact as specified by the Food and Agriculture Code prior to registering a chemical for any new food use.
- Tight and nonextendable deadlines for setting pesticide tolerances. If deadlines are not met, zero tolerance would be the default standard.
- That all imported food not meeting these requirements would be considered unsafe.
- That the Director of California's Office of Environment would have to develop and implement a worker protection program.
- That, among other requirements, county agricultural commissioners retain all pesticide use records long enough to evaluate the chronic health effects of exposure.

#### **The Consumer Pesticide Enforcement Act of 1990 (CAREFUL)**

The initiative would mandate:

- A doubling of pesticide residue testing for fresh produce from California and abroad.
- A scientific panel to evaluate EPA-listed pesticides that are known or probable carcinogens, and would establish a special review process.
- Extensive research into alternative methods of eradicating the medfly, and doubling the production of sterile flies to combat infestation.
- A review of pesticide registrations to determine if infants and children are adequately protected by existing food safety systems.
- That trucks that transport food could not also transport hazardous materials.
- A \$25-million program for research into alternative farming practices that would lower pesticide use.
- Strict and expensive penalties for pesticide violations.
- Stronger safety education and training for farm laborers who work with pesticides.
- Creation of a new Division of Food Safety within the California Department of Food and Agriculture.

## Commodity Spotlight

## World Agriculture and Trade

California accounted for 86 percent of area planted to processing tomatoes in 1989. But major California processors also have plants in other countries like Mexico and Chile. The U.S. imported anywhere from 6 to 10 percent of its annual production in the 1980's. As processing companies continue to internationalize, imports likely will increase.

Even so, due to California's dominance in processing tomato production, losses of key chemicals there would put downward pressure on output and upward pressure on prices on the national level.

The industry's use of IPM probably will soften the blow, although IPM users are concerned that chemicals key to their strategies would be banned. Losses of fumigants, though, would be critical to the soft fruit industry because there are few alternatives. Processors probably would look to move to less restrictive states or countries. [Shannon Reid Hamm (202) 786-1886] **AO**

## Poland Searches For An Ag Policy

**P**olish farming is in a crisis, and there is a strong possibility that agricultural output will drop in 1990. Farmers are being forced to face market prices for their output. But farm input prices remain stubbornly high, reflecting a lack of competition in the input industries. Moreover, inefficient and monopolistic processing and marketing sectors, coupled with weakening consumer demand, are holding down the prices farmers receive.

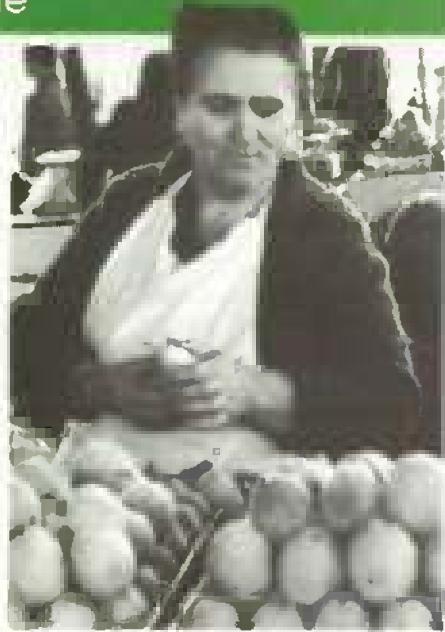
Farmers' inflation-adjusted incomes are falling as a result. To protest, farmers occupied the Ministry of Agriculture building in late June. And, more recently, milk producers in central Poland briefly blocked an international highway to demonstrate against a dairy factory that could not pay for earlier milk deliveries.

Polish officials have conceded that their farmers need some sort of support to get through the immediate crisis. However, the government has not yet determined what type and how much support is appropriate. Even more serious is the question of how to finance it.

On July 7, the Polish administration proposed offering farmers subsidized crop-specific loans, removing agricultural export quotas, and broadening the commodities covered under the new intervention purchasing agency. Farmers' political groups, however, are demanding guaranteed minimum prices.

Of all the East European countries, Poland has taken the most dramatic independent steps towards a market economy. All consumer price controls were removed last August, and by October virtually all consumer food subsidies had been eliminated.

However, the immediate result of these and other measures was a brief hyperin-



flation. Consumer prices rose tenfold nearly overnight and a wage-price spiral developed, driving prices even higher. Inflation reached an annual rate of nearly 600 percent by the end of 1989.

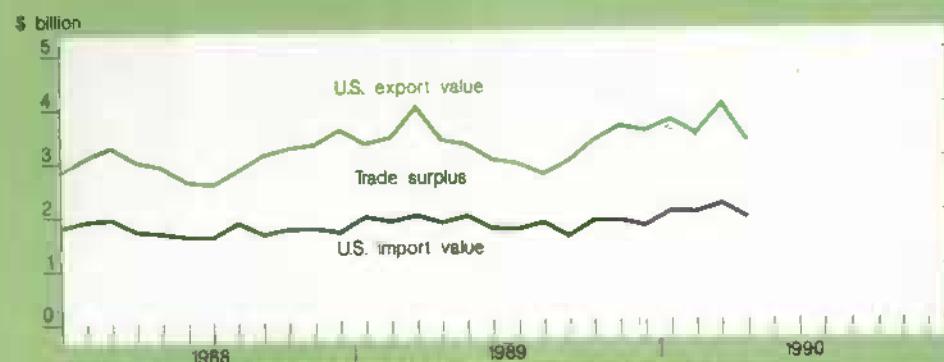
### Inflation Was Tamed

This January, the Polish government launched a far-reaching anti-inflation program. The key elements were:

- a balanced budget for 1990, to be accomplished by eliminating most remaining subsidies, including most of the coal subsidies, and by canceling several large investment projects;
- internal convertibility of the zloty at a uniform exchange rate;
- real progress towards privatization through the sale of corporate stock to workers and more aggressive action to break up the socialized meat, dairy, and coal producing monopolies;
- an overhaul of the tax system, including a new value-added tax and a personal income tax;

## World Agriculture and Trade

### U.S. agricultural trade balance



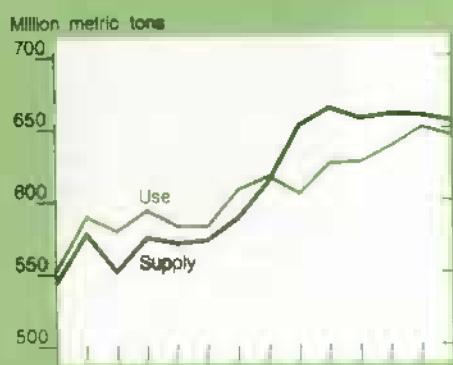
### Export volume



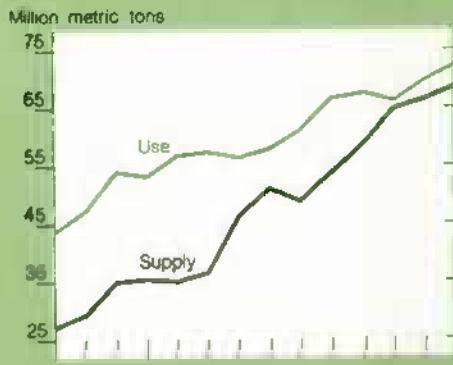
### Index of export prices



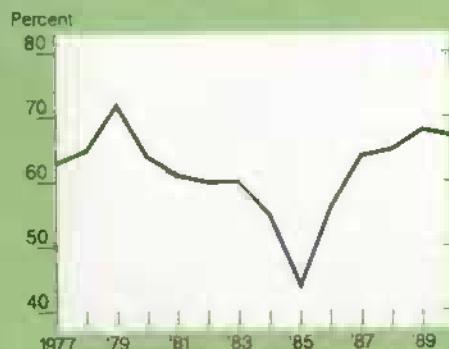
### Foreign supply & use of coarse grains



### Foreign supply & use of soybeans



### U.S. share of world coarse grains exports<sup>1,2</sup>



### U.S. share of world soybean exports<sup>1,2</sup>

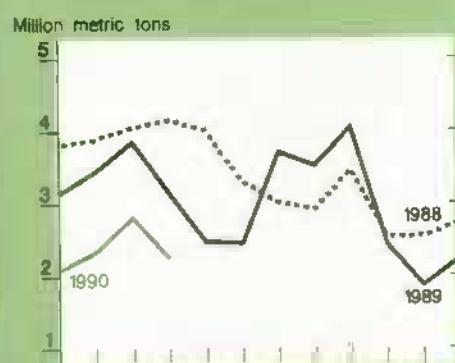


<sup>1</sup>Excluding intra-EC trade    <sup>2</sup>October-September years

<sup>3</sup>Includes fruit juices

## U.S. Trade Indicators

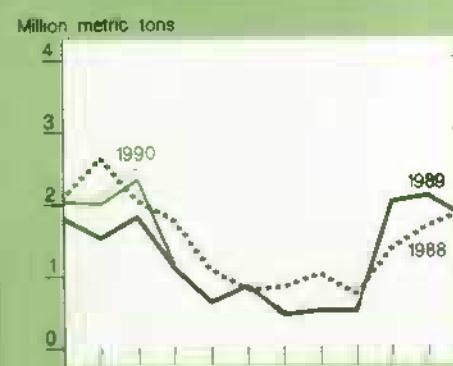
### U.S. wheat exports



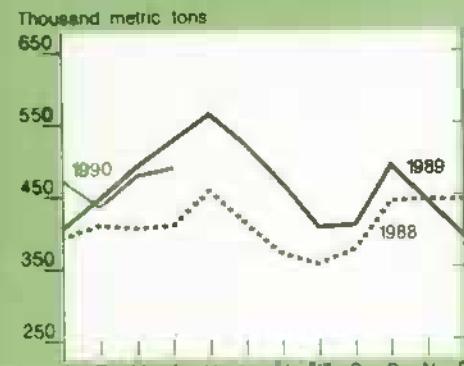
### U.S. corn exports



### U.S. soybean exports



### U.S. fruit & vegetable exports<sup>3</sup>



## World Agriculture and Trade

- strict curbs on enterprises' freedom to raise wages, with penalty taxes imposed on those that allow excessive wage increases;
- moves to establish a private commercial banking system, with positive inflation-adjusted interest rates (these should end financing budget deficits at state-owned companies with essentially free credit from the national banks); and
- a social "safety net" that includes unemployment compensation, indexation of pensions to inflation, and targeted food assistance (e.g., food stamps).

But now the Polish administration proposes to loosen some of these measures for the last half of the year in response to sharply falling national output. According to Prime Minister Mazowiecki, more money has been allocated for housing, social welfare, and agriculture—especially milk production.

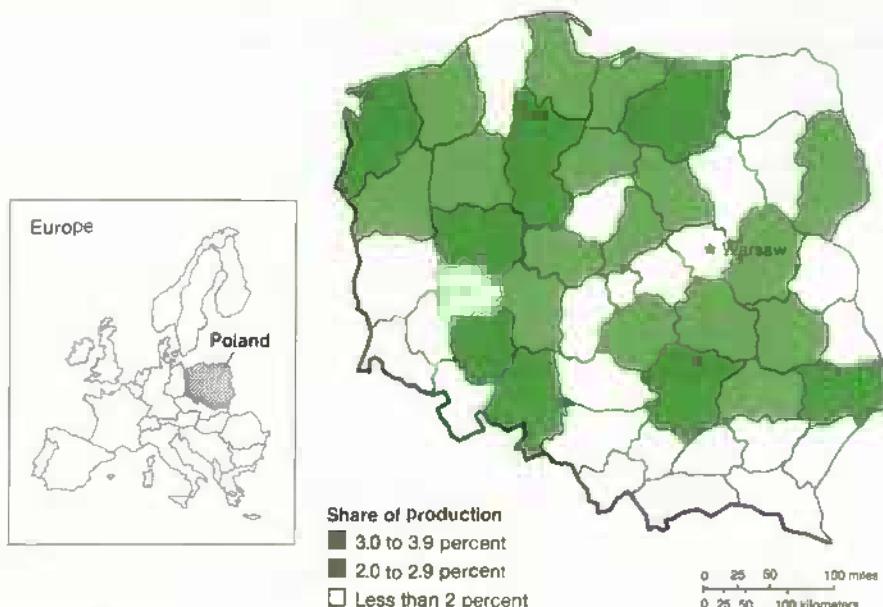
In addition, the administration has drafted a bill that would ease the penalty tax firms must pay if they allow large wage increases, provided the firm is earning a profit.

### **Cost-Price Squeeze Traps Farmers**

While the initial program lowered inflation, many institutional rigidities remain. Depressed incomes and very high consumer food prices are sharply cutting demand. Prices of industrial and farm inputs have risen equally fast. But prices paid to farmers have not risen at nearly the same rate, so farmers are seeing their real incomes plummet.

Procurement remains largely in the hands of inefficient state-run food processing monopolies. There has been a trend towards the breakup of these monopolies along regional lines into units free of centralized control. But on the whole, there is still little competition among these smaller units. Private sales outlets are increasing, but do not yet

Polish Grain Production Is Spread Across the Country



Based on 1987 data.

offer significant competition to the state network.

Managers of the procurement organizations maintain that they cannot offer higher prices to farmers. Because demand has fallen, they claim they cannot pass on any increases to consumers. They say that the entire margin between the procurement price and the retail price is eaten up by extraordinarily high transport, processing, and distribution costs, which are no longer subsidized. As a result, farmers are demanding a reinstatement of guaranteed prices.

Because of diminished profit expectations, grain output is projected to decline 4 percent while rapeseed production probably will drop 25 percent. Prices paid to farmers are generally below world levels, and, because input prices are still stubbornly high, farmers are using fewer chemicals. So yields are expected to be down considerably, even though area may rise slightly.

Livestock producers face even greater disadvantages. Farmers began selling their animals because they could not afford to keep them. But with consumer demand depressed, the market soon

became glutted. Faced with low procurement prices, hog farmers began slaughtering their breeding sows. Now, a few months later, farm prices are up, but animal supplies are tight.

### **Some Support Was Restored**

In response, the government has introduced some measures to ease the situation, but it has so far resisted demands for large direct supports for farmers. Recently, the Agency for Agricultural Marketing was created to make intervention purchases. It bought hogs when prices were depressed in March.

In addition, because farmers had almost entirely stopped buying fertilizer, the government has reinstated limited fertilizer subsidies in the form of lower prices for the chemical ingredients.

The government is now thinking about permitting wheat exports to help pull up farm prices, according to several reports. Polish wheat prices are about 44 percent of world prices. However, EC officials are concerned that such export sales would violate earlier food aid agreements.

## World Ag. and Trade

The government also began providing low-interest credit to farmers that want to buy farmland. However, to date, there has been little interest in purchasing farmland—presumably because of the unfavorable profit outlook. Land prices in Poland have tended to be low, and are related not so much to fertility but to the level of infrastructure in a given area.

On the positive side, the state farms of Poland are now said to be better run and more profitable. But one of the main reasons is that the state farms have had better access to inputs. Some 20-30 of the 2,620 state farms have gone bankrupt. The rest have improved their performance by specializing in crop production and abandoning unprofitable livestock operations.

However, since private farmers have also reduced livestock inventories because of high feed costs, this trend does not bode well for livestock output in the near term. USDA research suggests that Poland's comparative advantage lies in livestock output. Yet the relationship between feed costs and livestock prices has been so distorted that livestock production so far has been less profitable than crop production.

### **Monopolies Will Impede Progress**

The real problem in Polish agriculture is the excessively high costs of production which make it difficult for farmers to realize a profit, even with rising procurement prices. These high costs result in part from the continuing state monopolies on input supplies and in part from the small, fragmented farm structure, which keeps per-unit production costs high.

Also at fault is the inefficiency of the processing sector. Misguided investment decisions by the previous regime caused processing plants to be placed far from most farms, which greatly increased transport costs and boosted losses due to spoilage en route.

Polish government officials stress that costs must be lowered to make Polish agriculture more competitive. The

government's ultimate goal is to allow more efficient farms to expand, thereby lowering per-unit output costs. The government also plans to force competition into both the input and the processing sectors—partly by privatizing state companies, and partly by liberalizing imports. [Nancy J. Cochrane (202) 786-1621] AO

## General Economy

# Exports Are The Key

Real GNP in the U.S. rose at a 1.9-percent annual rate in the first quarter, following a sluggish 1.1 percent in the last quarter of 1989. Nevertheless, a recession has been avoided thus far, and strong export growth likely will continue to fuel the economy. U.S. economic growth should average 2-3 percent over the next 12 to 18 months.

Inflation has slowed after the transitory spurt in the first quarter. The spike largely reflected the cold spell in late December that pushed up food and energy prices. For the next 12 to 18 months, consumer prices should advance at an annualized rate of 3.5-4.5 percent.

Domestic spending probably will remain relatively weak. The rate of increase in consumption spending is likely to fall as service expenditures post small increases.

Despite weakness in residential investment, nonresidential investment is likely to continue at a moderate pace. Based on Census Bureau surveys, a 5.5-percent increase in overall real investment is expected during 1990. In the first quarter of the year, real plant and equipment expenditures rose an annualized 7.2 percent.

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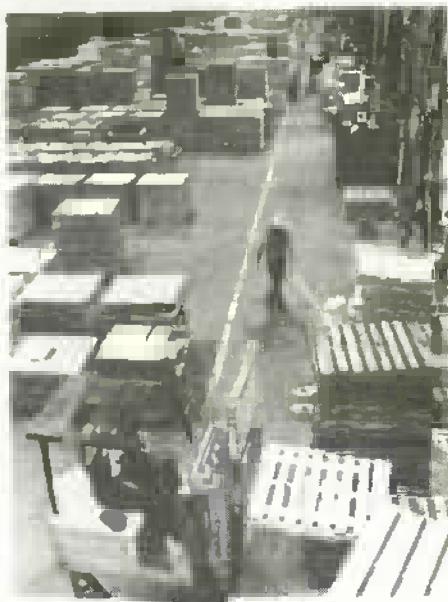
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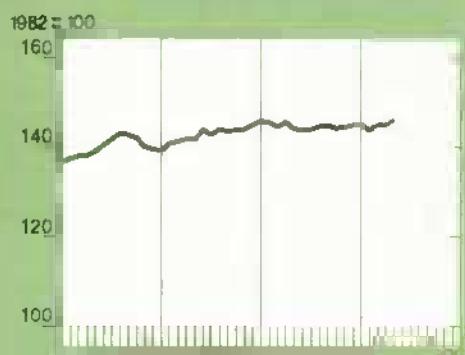
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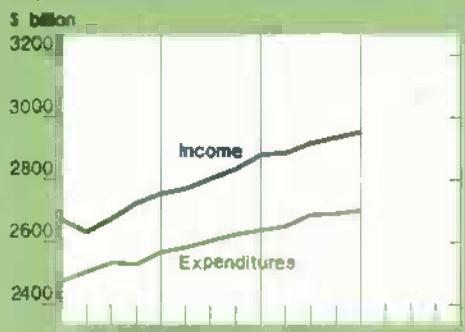


## General Indicators

### Composite leading economic indicators



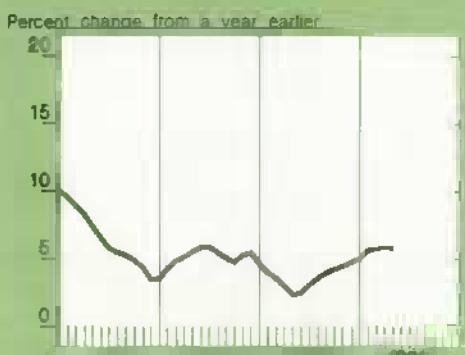
### Disposable income and consumption expenditures<sup>2</sup>



### Consumer price index



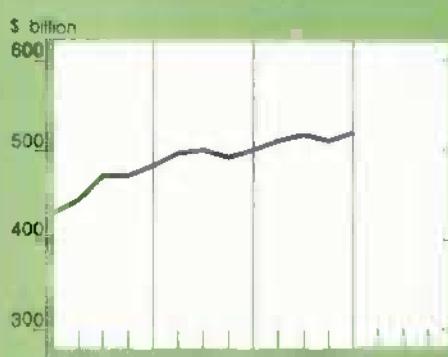
### Money supply (M2)



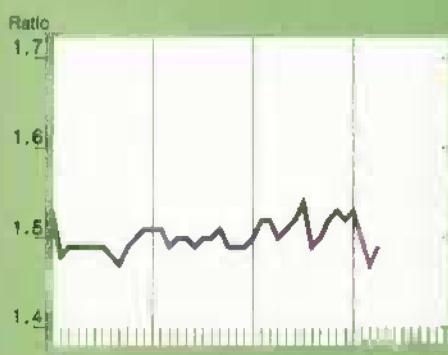
### Gross national product<sup>1</sup>



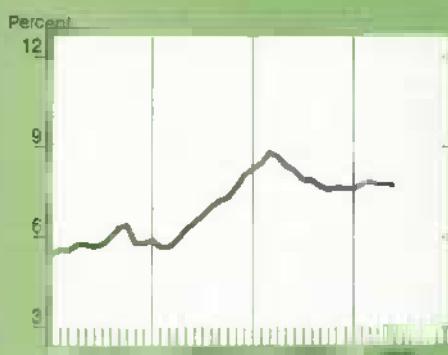
### Nonresidential fixed investment<sup>2</sup>



### Inventory/sales<sup>4</sup>



### 3-month Treasury bill rate

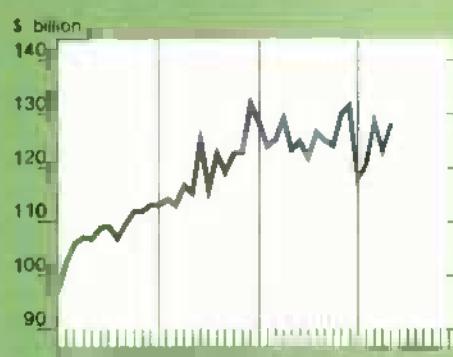


## General Economy

### Industrial production



### Manufacturers' durable goods orders<sup>3</sup>



### Unemployment rate<sup>5</sup>



### Savings rate<sup>6</sup>



<sup>1</sup>Percent change from a year earlier in 1982 dollars. Seasonally adjusted annual rates.

<sup>2</sup>Billions of 1982 dollars, seasonally adjusted at annual rates.

<sup>3</sup>Nominal dollars. <sup>4</sup>Manufacturing and trade, seasonally adjusted; based on 1982 dollar.

<sup>5</sup>Seasonally adjusted.

<sup>6</sup>Calculated from disposition of Personal Income in 1982 dollars, seasonally adjusted at annual rates.

Sources: U.S. Dept. of Commerce, U.S. Dept. of Labor, and the Board of Governors of the Federal Reserve System.

## General Economy

With slow growth in domestic spending, exports will have to continue to buoy overall economic performance. Exports have been an increasing source of growth over the past several years, with the export share of gross national product rising from 13.2 percent in 1988 to 14.9 percent in first-quarter 1990.

For the U.S. economy to expand at a faster rate, international trade will have to play a larger role. During January-April, exports advanced 8.9 percent over a year earlier while imports went up 4.8 percent.

### *Revolving Strength Propelled Growth*

The U.S. economy has entered its eighth year of continued growth. Over the first 5 years of the expansion, personal consumption and government spending primarily led economic growth. In the past 2-3 years, however, exports and nonresidential investment spending have played more important roles.

The length of the expansion shows that the economy has benefited from the shift of the leading role from one component to another—first consumption, then investment, and now exports.

First-quarter GNP growth was revised upward to 1.9 percent from 1.3 percent, led by consumer spending on durable goods and exports. The durable goods increase of 14.1 percent (annual rate) smoothed the 14-percent drop in fourth-quarter 1989.

In addition, nonresidential and residential investment rose a substantial 7.7 and 9.7 percent. Residential investment turned around after slipping for four consecutive quarters.

Overall consumption was slack despite the healthy durable goods rise. Purchases of services rose an average 3.7 percent in 1988 and 1989, but grew only 1.3 percent in the first quarter. Nondurable goods purchases declined after no growth in the fourth quarter.

Other signs of weakness are emerging. Recent government releases for the second quarter indicate low or no growth in total consumer expenditures, the largest component of national output. Overall investment also is likely to slow, as residential investment is retarded by a drop in housing starts. Further, government spending will not contribute substantially to growth as efforts to reduce the federal budget deficit continue.

Still, there is potential for continued slow growth. Short-term interest rates have dipped slightly, and industrial production and employment continue to move up. Price increases have moderated, lessening the chances that the Federal Reserve will further tighten monetary policy.

Indeed, Chairman Greenspan indicated that the Fed had slightly loosened its grip on the money supply to alleviate credit market pressures. Greenspan also suggested that monetary policy could be loosened further if the White House and Congress achieved significant cuts in the budget deficit.

### *Inflation Slowed In Second Quarter*

Throughout the second quarter, producer and consumer prices advanced more slowly. The first quarter spike is apparent in the annualized 3-month growth rates for consumer prices ending in November (4.2 percent), February (8.2 percent), and May (3.2 percent).

The service sector is the source of continued inflation. Commodity prices grew 4.2 percent during September-November, 10.6 percent during December-February, and 0.3 percent during March-May. But service-sector prices rose 4.6 percent during September-November, 6.1 percent during December-February, and 5.1 percent during March-May.

The service sector's 5.1-percent inflation rate during March-May reflects the 10.1-percent price increase for medical services. Even with its recent cooling, overall inflation during 1990 will be about a percentage point higher than orig-

inally anticipated, reflecting the first-quarter surge.

Employment gains have slowed from a year earlier. On average, total nonagricultural employment rose by 250,000 jobs a month in 1989. But in the first 5 months of 1990, the increase was about 200,000 jobs. Goods-producing jobs continued to shrink, while service jobs were propped up by government hiring of temporary census workers.

In the last half of 1989, total service-sector employment rose an average 180,000 jobs a month. Excluding the government sector, the rate was 155,000. Yet, in the first quarter of 1990, the gain in service-sector jobs rose to 218,000 a month. Excluding government job gains, however, the average fell to 118,000.

One industry—health—has buoyed overall service-sector employment. Job gains in health services accounted for almost 20 percent of the yearly service-sector employment gain this May.

Overall, the national unemployment rate remains low. Unemployment has fluctuated between 5.0 and 5.3 percent of the civilian labor force for the last 21 months.

### *Watch For Data Revisions*

The Commerce Department's Bureau of Economic Analysis was scheduled to release revisions to the GNP accounts for the past 3 years on July 27. The revisions were to be based on changes in the components of GNP generated by new actual data. Often, actual data are not available for 2-3 years after the end of a particular year.

In the past, the revisions have meant big changes. For example, the July 1988 revisions pushed down real GNP growth for the second quarter of 1986 from a positive 0.6 percent to a negative 0.8 percent at an annual rate. Up until that point, no quarter had shown negative growth during the expansion. Then, in 1989, the second-quarter 1986 growth rate was revised downward again to a negative 1.8 percent.

## General Economy

Those revisions suggested that the economy was much weaker than originally perceived. But, the overall 1986 real growth rate only slid from 2.9 to 2.7 percent because of the revisions.

While revisions may not have changed annual GNP growth much, views on particular revised components may have been altered. The July 1989 revisions incorporated new information on exports of services that led to a rise in net exports. [Elizabeth Mack and John Kitchen (202) 786-1785] **AO**

### Upcoming Releases From the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the next *Agricultural Outlook* comes off press.

#### August

- 1 Egg Products
- 2 Farm Production Expenditures 1989-Final
- 3 Dairy Products  
Poultry Slaughter
- 7 Celery
- 9 Crop Production
- 10 Vegetables
- 13 Farm Labor  
Turkey Hatchery
- 15 Milk Production
- 17 Cattle on Feed
- 20 Mushrooms
- Sugar Market Statistics
- 21 Catfish
- Cranberries
- 23 Eggs, Chickens, & Turkeys
- 24 Cold Storage
- Hazelnut (Filbert) Production-Tentative
- Livestock Slaughter
- 29 Peanut Stocks & Processing
- 30 Rice Stocks
- 31 Agricultural Prices

## Resources

# A Wetlands Reserve: What Cost?

**P**resident Bush, in his 1990 budget message, called for a national goal of "no net loss" of wetlands. Restoring former wetlands now used for farming through a voluntary reserve would meet part of the "no net loss" goal by offsetting unavoidable future wetland losses.

Proposals have called for reserves ranging from 1 to 5 million acres of wetlands. The reserves would be composed of wetlands restored from cropland as well as existing wetlands. The government would pay landowners for long-term or permanent restrictions (easements) on agricultural use of the wetlands and part of the restoration cost.

USDA research shows that government expenditures for a least-cost 1-million-acre restoration program would be an estimated \$194-\$286 million. Of that, \$105-\$197 million (54 to 69 percent) would be for easements; the remainder would go for wetlands restoration. The "least-cost" scenario assumes that the cheapest acres are enrolled first.

Survey, appraisal, and other administrative costs are not included in these estimates, and they likely would be a significant portion of any reserves's total costs. Constraints on enrollment per county and resistance by some farmers to the program could result in higher cost estimates.

Costs for a 2.5- and 5-million-acre reserve would rise to \$845-\$1,332 million and \$2.4-\$3.8 billion, with easement costs rising as high as 82 percent of the totals. The last, most expensive acre to be added to the reserve would cost \$310-\$581 for the 1-million-acre reserve, and \$730-\$1,184 for the 5-million-acre reserve.

Easement costs are based on estimated net returns from crop production, and rep-



resent what farmers would give up by idling the cropland. It is estimated that program crops and soybeans are grown on two-thirds of cropland that would be included in reserves with the lowest costs, although it is not possible to determine how much of this land is actually enrolled in commodity programs.

Ten states with large amounts of eligible cropland make up 90 percent of all land likely to be enrolled and almost three-quarters of all cropland that would be eligible.

Minnesota has more low-cost cropland that probably would be eligible than any other state. And, if least-cost land were enrolled first, more than half of a 1-million-acre reserve and more than one-third of a 5-million-acre reserve would be in Minnesota. Corn Belt states likely would account for about one-quarter of the reserves.

## Swampbuster Spearheads Protection

Government regulations increasingly restrict landowners' use of wetlands, boosting the appeal of a wetland reserve to farmers. Cropland may not correspond with the common image of wetlands, but may be treated as wetlands by the two programs that most directly affect private landowners: The Food Security Act's swampbuster provision

## Resources

and the Clean Water Act's Section 404 permit program.

In the swampbuster provisions, USDA defines wetlands as soils formed under saturated conditions (hydric soils) that are undrained, inadequately drained, or seasonally wet long enough to support water-loving plants normally found in wetlands, even if the wetland plants have been removed.

More than 55 million acres of cropland are on hydric soils; nearly half may be subject to swampbuster provisions. In 1989, farmers used 342 million acres of cropland, including summer fallow.

The prairie potholes of the Northern Plains are typical of farmed wetlands. They are shallow glacial depressions that collect snowmelt and spring runoff, but become dry enough to plant wheat in most years. Another common example is bottomland fields in the lower Mississippi alluvial plain that flood during the winter, but become dry enough for spring soybean and corn plantings.

Swampbuster provisions do not preclude farming these wetlands, but a farmer cannot further drain or otherwise alter the hydrology without losing farm program benefits. Farmed wetlands are not pristine natural ecosystems, but they perform valuable natural functions and are important as waterfowl wintering, feeding, and nesting areas.

Prior to 1989, the U.S. Army Corps of Engineers exempted areas previously converted for crop production from Section 404 permit requirements. Section 404 restricts the conversion of wetlands. Faced with concerns over differing procedures, the four agencies with primary wetlands responsibilities (the Corps, Environmental Protection Agency, U.S. Fish and Wildlife Service, and USDA) adopted the more encompassing swampbuster procedures in a standard wetlands delineation manual.

The Corps regulates new dredging and filling on a considerably larger amount of farmland. However, normal agricultural practices, such as maintaining drainage ditches and rebuilding levees for rice

rotations, continue to be exempt from Section 404 permit requirements.

### 7 Million Acres Are Affected

Because USDA has already implemented the bulk of the Conservation Reserve and Conservation Compliance Programs, the Department recently has devoted more effort to accelerating the swampbuster program. So far, USDA has made wetland status determinations for about 40 percent of farms and identified more than 7 million acres of wetlands subject to swampbuster.

A recent memorandum of agreement between EPA and the Corps of Engineers also focused attention on farmed wetlands. The agreement stresses more aggressive implementation of Section 404, requiring a three-stage process to avoid, modify, or mitigate wetland losses, often by making compensating wetlands restoration a condition for permit approval.

Farm groups, surprised by swampbuster's swift emergence in the 1985 farm act, developed positions on proposed changes to swampbuster and other wetlands programs for the 1990 farm bill. Congressional and Administration proposals for the conservation title of the new bill have all included wetlands provisions.

### Wetlands Protection Has Long History

Policies to conserve existing wetlands on farms have been evolving over the last 20 years. Direct federal actions and incentives to convert wetlands were prohibited in 1977. The swampbuster provision in the 1985 farm act and the 1986 Tax Reform Act eliminated or dampened most indirect incentives. Cropped wetlands were made eligible for the Conservation Reserve Program in 1989.

The National Wetlands Policy Forum endorsed increased efforts to restore altered wetlands to their natural state in pursuit of a long-term goal of increasing the quantity and quality of the nation's wetlands. The Forum is a blue-ribbon panel convened by the Conservation Foundation at the request of EPA. It recommended implementing a 10-year Agricultural Wetlands Reserve Program to restore 2.5 million acres previously converted to agriculture.

The National Wetland Priority Conservation Plan and the U.S./Canadian North American Waterfowl Management Plan both call for increased acquisition and restoration of wetlands. Legislation passed last fall authorized \$15 million per year from 1991 to 1994 for a Wetlands Trust Fund to acquire land and pay for some wetland restoration projects needed to meet the North American Plan's goals.

**A 1-Million-Acre Wetlands Reserve Would Cost an Estimated \$194-\$286 Million**

	Reserve size (million acres)		
	1	2.5	5
Total cost	194-286	845-1,332	2,375-3,851
Easement	105-197	557-1,044	1,687-3,164
Restoration	89	288	688
		\$/acre	
Average cost			
Total	194-286	338-533	480-778
Easement	105-197	223-418	341-639
Restoration	89	115	139
Marginal cost*	310-581	510-804	730-1,184

\*Range based on capitalizing estimated net returns from crop production at 7.5 and 4 percent interest rates. Land with lowest total costs is assumed to be enrolled first.

## Resources

Even if wetlands conservation is generally successful, "no net loss" must allow for unavoidable future losses of wetlands. Restoring some wetlands lost to marginal agricultural and urban uses in the past is one way to make up for such losses.

An interagency task force is working to recommend means to accomplish the President's "no net loss" goal. Public meetings are scheduled for this summer to gather opinions on wetlands issues. Views are being sought on market-based approaches to wetlands protection and the appropriate roles for state and local governments.

The task force also is considering a new Executive Order on wetlands, legislation to achieve the "no net loss" goal, and recommendations to reduce wetlands losses from agriculture. It is looking for ways to address the unique circumstances surrounding development in Alaska and loss of wetlands in the Delta area of Louisiana.

### Fundamental Choices Ahead

The general public now realizes that wetlands are no longer the pestilential swamps once thought good only for "reclamation" to useful purposes. The biological productivity of wetlands and their roles in retarding flood peaks, filtering sediment and nutrients from surface water, and recharging groundwater sources provide benefits to society.

However, private landowners obtain few opportunities for profit until natural wetlands are drained or filled for crop production, marinas, or new houses.

"No net loss" involves choosing between different means of ensuring adequate wetlands resources. Limiting wetland conversion, through Section 404 and the swampbuster provision, protects public wetland benefits at the landowners' expense. In contrast, landowners would be compensated for land acquired and restored for a wetlands reserve, but at a large cost to the public. Policymakers are seeking a balance. [Ralph Heimlich (202) 786-1422] AO

## Policy

# Exports & The 1990 Farm Bill

*This article reviews the major export program provisions of the trade titles of the 1990 farm bill when they emerged from the House and Senate Agriculture Committees in July. Since then, work has proceeded on crafting the final bills, and some of the provisions may have changed. But the Committee provisions show what concerns are uppermost in the minds of key Congressional policy-makers.—Ed.*

The Agriculture Committees have now reported their versions of the 1990 farm bill for consideration by the full House and Senate. For the most part, the Committees' proposals would continue the thrust of the export programs now in place. The most significant changes deal with P.L. 480 overseas food aid—debt relief and grants stand to play a larger role in concessional sales. Further, some aspects of P.L. 480 program management would be changed by the legislation now under consideration.

### 1990 Bill To Reauthorize EEP

The Export Enhancement Program (EEP) is a targeted export price subsidy program authorized under the 1985 Food Security Act and extended under the Omnibus Trade Act of 1988. In crafting a renewal of the EEP legislation, Congress is focusing on the total bonus value, program objectives and management, and the mix of commodities to be promoted.



A key issue is how much to spend. Annual EEP bonuses increased from \$300 million in fiscal 1986 to \$1 billion in fiscal 1988, but dropped to \$340 million in fiscal 1989 and, as of mid-July, are estimated to be \$225 million in 1990. The House Agriculture Committee proposes a minimum of \$500 million annually from fiscal 1991 through 1995, with no stated maximum.

The Senate Committee on Agriculture, Nutrition, and Forestry does not propose specific spending targets for the EEP. Proposals in both Houses of Congress allow the Secretary of Agriculture to use either Commodity Credit Corporation (CCC) funds or commodities for EEP bonuses.

The House and Senate proposals emphasize countering unfair trade practices as the EEP's chief goal. In particular, the Senate Committee proposal defines unfair trade practices to include direct export subsidies to firms, currency retention schemes, favorable internal transport or freight charges for export shipments, tax rebates on exports, processing subsidies, and the "...discriminatory pricing policies of monopolistic marketing boards and state trading agencies."

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The Senate Committee version also would encourage use of the EEP to develop, maintain, and expand U.S. agricultural exports.

The Committee bills now before the House and Senate support promoting high value and value-added products. The Senate Committee's bill would make 10 percent of EEP bonuses available for these commodities, while the House Committee's bill would encourage USDA to use at least 25 percent. During May 1985-June 1990, about 20 percent of EEP bonuses were used to promote high value and value-added products.

Although the House's \$500-million minimum bonus would be higher than the actual 1989 and 1990 levels, heavy competition among world wheat exporters and more aggressive targeting of products other than wheat could push annual bonuses above \$500 million.

The Senate Agricultural Committee's bill also would extend the Sunflowerseed Oil Assistance Program (SOAP) and the Cottonseed Oil Assistance Program (COAP). Under the two programs, the CCC provides bonuses of vegetable oil to exporters to encourage exports at competitive prices. Proposed funding would be \$50 million annually from 1991 through 1995.

Fiscal 1988 appropriations authorized \$10 million for SOAP. In fiscal 1989, that was increased to \$20 million for both programs. An additional \$30 million was appropriated for sales under both during fiscal 1990 and 1991. But since 1988, government outlays for both have totaled only about \$12 million.

### ***TEA Would Be Replaced***

House and Senate Committee bills would change the name and main objective of the Targeted Export Assistance (TEA) program. The Senate Marketing Assistance Program (MAP) and the House Market Promotion Program (MPP) that would replace the TEA program have the development, maintenance, and expansion of commercial export markets as their main goals.

Under the proposed programs, eligible trade organizations would receive CCC commodities or funds to cover a share of the implementation costs for foreign market development programs.

While the primary objective of the TEA program was to counter unfair foreign trade practices, the proposed MAP and MPP emphasize export enhancement objectives, although priority would be given to trade organizations whose commodities have been disadvantaged by the unfair trade practices of foreign countries.

The Senate Committee's bill draws on the 1985 act and would give explicit priority to products that have received a favorable decision under Section 301 of the Trade Act of 1974 or that have suffered retaliatory action as a result of a favorable Section 301 action.

Proposed funding is up slightly compared with the current program. TEA program authorizations totaled \$110 million a year for fiscal 1986-88 and \$200 million a year for fiscal 1989 and 1990. The House and Senate Agriculture Committee bills would fund the MPP and MAP at annual minimums of \$200 million and \$225 million. The Senate Committee also proposed an annual maximum of \$325 million.

The bills emphasize that participating trade organizations would have to contribute to the cost of developing their markets.

The Committees' bills would require USDA to specify eligibility criteria for trade organizations, marketing plans, recordkeeping, and eligibility for multi-year assistance. And they give conditions for USDA to terminate a promotion program. The House Committee bill also would direct USDA to periodically evaluate the program.

The Senate Committee's trade title would give priority to promoting high value products in countries—especially many in Eastern Europe—defined as eligible under the Food for Freedom Program.

The House Committee's bill would also set an objective of increasing the share of marketing program funds for promotions by regional associations of state departments of agriculture, as opposed to commodity organizations or private firms.

*[Karen Ackerman (202) 786-1823]*

### ***Credit Guarantees Are the Granddaddy***

While the EEP and market development programs attract much attention, the largest U.S. export programs are the CCC's export credit guarantee programs. Administered by the USDA's Foreign Agricultural Service, these help U.S. exporters to be competitive in markets that face foreign exchange constraints.

The short-term export credit program, GSM-102, guarantees repayment of private credit extended for up to 3 years for purchases of U.S. agricultural commodities. The intermediate-term program, GSM-103, guarantees credit for 3-10 years.

The programs are intended to maintain or expand U.S. agricultural exports to countries where private financial institutions would be unwilling to provide financing at acceptable rates. By transferring the risk of nonpayment to the CCC, credit guarantees allow private financial institutions to offer loans on significantly better terms than the foreign buyer would otherwise receive.

Authorizations for GSM-102 and GSM-103 have remained at the minimum \$5 billion and \$500 million a year since fiscal 1986.

Actual use of available guarantees reached a record of nearly \$4.8 billion for GSM-102 and \$426 million for GSM-103 in fiscal 1989. Demand for credit guarantees likely will remain strong because developing countries' debt burdens remain high, competition among exporting countries is intense, and potential markets are opening in emerging democracies.

Proposed changes from current law fall into five broad areas: authorization levels and earmarking for emerging democracies, program objectives, oversight guidelines, participant restrictions, and commodity eligibility.

## **House Aims At Emerging Democracies**

Both Committees' bills would reauthorize the current minimums for GSM-102 and GSM-103. But the House Committee's bill also proposes targeting the emerging democracies. For such countries, the bill would earmark a minimum of \$225 million under GSM-102 and would encourage USDA to use more GSM-103 funds as well. Additionally, the House bill would make \$50 million in guaranteed financing available to establish and upgrade handling and marketing facilities in these countries.

Both Committees' bills clarify the goals of the export credit guarantee programs. The Senate bill identifies program objectives, such as helping U.S. producers compete, increasing U.S. exports, and helping importing countries meet their food and fiber needs. The House bill would require that the programs directly benefit U.S. producers.

The bills would restrict the CCC from making credit guarantees available to countries that cannot adequately service the debt, and from using guarantees as foreign aid. The House bill also would bar use for foreign policy purposes, while the Senate bill would prohibit their use for debt rescheduling.

Further, the Senate Committee bill would require that participating U.S. financial institutions be in good condition, experienced, and wholly independent from the importing country's participating bank.

The bills also address the commodity content issue. Both explicitly set conditions for when or how much foreign content would be permissible. Both stipulate that only the U.S. portion of the commodity can be covered under the program. And they explicitly put wood products on the same footing as other commodities.

Most of the proposed changes to GSM-102 and GSM-103 may be considered to be primarily clarifications. Significant discretion would continue to be given to USDA. Given the already heavy use of these programs, small additional increases in exports under the programs are expected because neither Committee has recommended significant funding increases. However, earmarking different countries would change the distribution of country allocations. *[Ann Fleming (202) 786-1820]*

## **P.L. 480 To Be Reauthorized**

The Food for Peace Program, also known as P.L. 480, was established by the Agricultural Trade Development Act of 1954. Legislation authorizing P.L. 480 expires December 31, 1990, and reauthorization is now part of the Committees' farm bills. P.L. 480's four major objectives are to:

- develop and expand export markets for U.S. agricultural commodities,
- combat hunger and malnutrition,
- encourage economic development in developing countries, and
- promote U.S. foreign policy.

P.L. 480 is the main vehicle for food aid to developing countries. In recent years, the U.S. has provided 6-8 million tons of agricultural commodities to approximately 70 countries through the program. The law contains three titles and is administered jointly by five federal agencies—the Departments of Agriculture, State (including the Agency for International Development, AID), Treasury, and the Office of Management and Budget.

Title I authorizes concessional sales to friendly developing countries. The U.S. provides long-term concessional credit (up to 40 years with a 10-year grace period) for U.S. agricultural commodities. The recipient sells the commodities domestically and the resulting local currency revenues are jointly programmed for self-help measures.

The 1985 farm act also authorized a local currency initiative under P.L. 480 to generate economic growth in the private sectors of recipient countries. The recipient country pays for U.S. farm products with local currency. These local currencies are then loaned by the U.S. government to private financial intermediaries in recipient countries, who in turn lend to local businesses.

Title II is the food donation program used to alleviate hunger and combat malnutrition, provide disaster relief, and encourage economic development. Title III, the Food for Development Program, provides for the forgiveness of Title I debt if mutually agreed-upon development projects are achieved.

Two other food aid programs provide food aid overseas. One is Section 416(b) of the Agricultural Act of 1949, as amended, which donates surplus CCC commodities through channels similar to Title II of P.L. 480. While Title II food donations are funded through appropriations, Section 416(b) depends on the availability of uncommitted surplus CCC commodities.

The other is the Food for Progress Program, which provides food assistance to developing countries committed to market-oriented agricultural policy reforms. This program is carried out using authority of P.L. 480 or Section 416(b), and also expires in 1990.

## **Debt Burden Is An Issue**

The major differences between the House and Senate Agriculture Committees' proposals dealing with food aid are: the definition of foreign policy that can be supported by food aid, and the decisionmaking and administrative structure of the food programs. Further, heavy debt burdens of some Title I recipients raise the question of why food aid is provided as concessional loans rather than grants.

The Agriculture Committees propose several program changes to P.L. 480, including new authority for grants under Title I and forgiveness of Title I debt for the

## Policy

poorest countries undertaking structural adjustment programs. The concessional sales program would continue for those countries that have the potential to repay and become commercial markets for U.S. agricultural exports.

The Senate Committee's bill would tighten terms for credit sales to a maximum of 20 years with a 7-year grace period. The House Committee's bill would reinstate the authority to make sales directly to private trade entities, last done in 1975.

The bill before the Senate would change lines of authority. AID would be responsible for the grant program and USDA for the market-development credit sales program.

Other changes in Title II proposed by the Committees include establishing a Food Aid Consultative Group to improve communication between AID and private voluntary organizations, and to use a share of Title II funding to begin new programs and help cover the administrative expenses of private organizations and cooperatives.

The Committees' bills would allow the Food for Development Program to expire, because debt forgiveness would be incorporated into the new Title I.

The Senate Committee proposes replacing the Food for Progress Program with a new Food for Freedom Program. Food for Freedom would provide assistance to developing democracies and give the President additional flexibility, funds, and authority to assist countries that are turning toward democracy or are instituting free market reforms. The House Committee's bill would reauthorize the Food for Progress Program.

Section 416(b) would be revised under the Senate bill. Instead of a separate food donation program, Section 416(b) also would provide surplus CCC-owned commodities for P.L. 480 Titles I, II, and III. The minimum donation levels would be retained.

Overall, the bills now being debated distinguish the various objectives of different types of food aid, while the Senate Committee's bill would change management responsibility for them. For the poorest countries, more aid could come in the form of donations, administered by AID in the Senate Committee bill. For those countries that are better able to pay for their food needs, the emphasis would be on concessional sales and coordinated market development under USDA management. [Nydia Suarez (202) 786-1820] AO

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## Special Articles

# Brazil: A New Start?

*Brazil has embarked on a journey to a more market-oriented economy. While President Fernando Collor de Mello's tough reforms have brightened the long-term outlook, they likely also mean a recession for the next couple of years. Still, given the history of Brazilian economic reforms, coupled with the nation's crippling debt burden, the final results of Collor's program are still in question.*

*Expect larger agricultural exports from Brazil over the next few years, in part because growers there face soft domestic markets. But opportunities for sales to Brazil should also improve as trade barriers come down. In the long run, domestic food demand will increase if the reforms pull up economic growth.*

—Ed.

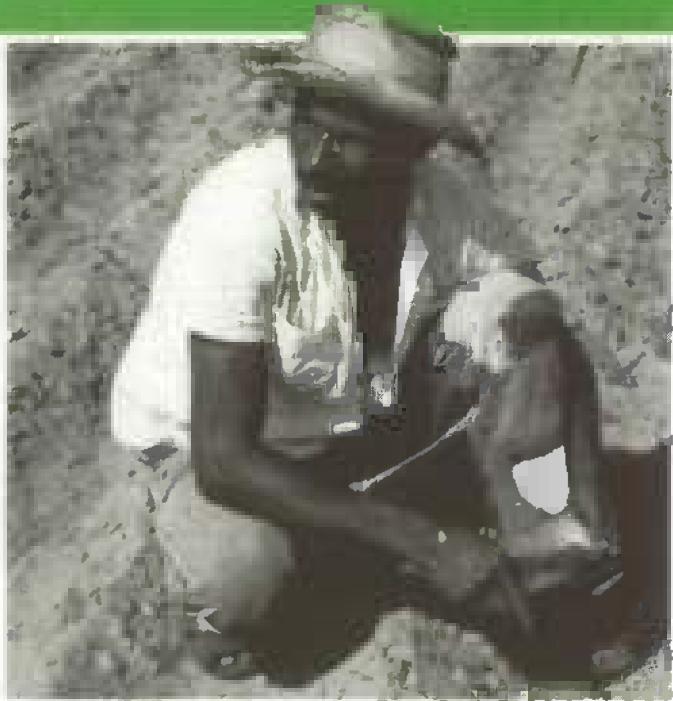
**U**nder President Collor's sweeping and stringent reforms that were put in place this March, Brazil faces the 1990's with part hope, part fear. Hope that the new policies and programs will restore investment, growth, and stability. Fear, in the words of one Brazilian, that the cure may kill the patient.

Daily life for the average Brazilian had become so difficult that the harsh reforms were overwhelmingly accepted when Collor was inaugurated. Nonetheless, many Brazilian economists expect the reforms to cause a 2-year recession.

Collor's plan differs from earlier reforms by reducing the size and scope of the government, and by opening up the Brazilian economy to foreign competition. The main goals are to eliminate inflation, reduce public debt, and restore long-run economic growth by paring back government intervention in all sectors to encourage private investment.

To meet these goals, the Collor government raised taxes, froze two-thirds of the country's financial assets for 18 months, and is deregulating the foreign exchange market. Government spending is being cut. Thousands of government workers have been fired, as state assets are being sold and bureaus eliminated.

The government also is retiring domestic debt by forcing people to trade in their government bonds for stock in chronically inefficient state-owned enterprises. By forcing partial privatization of state firms in this manner, Collor hopes to infuse enough market pressure to increase efficiency. Losses at state-owned companies also are being cut by raising output prices to cover costs of production.



### Several Reforms Aimed at Farmers

The Collor government is committed to three major changes that will affect agriculture: moving to a floating exchange rate, removing nontariff trade barriers (including the end of trade licensing), and instituting new farm income taxes.

Brazil's currency was estimated to be 30-50 percent overvalued when the new exchange system began, and a gradual devaluation now underway should stimulate exports. But a hike in the tax on export profits from 18 to 30 percent and increased prices for imported inputs will offset part of the devaluation's stimulus.

Removing nontariff barriers to trade should diversify agricultural trade substantially because most import and export bans on farm products are being removed. However, the effects of removing nontariff barriers remain unclear because tariffs are being revised to offset lost protection. While tariffs may rise in the short run, the government does plan to gradually reduce all tariffs over the next 3 years to an average of 20 percent from the current 33 percent.

While it appears contradictory, the new farm income taxes are designed to encourage agricultural investment. That's because the tax will be assessed only on profits not reinvested in the sector. However, little is known about the implementation of the new tax.

Collor's reforms have shown some initial success in reducing inflation—prices have been falling because the asset freeze drastically cut the money supply. But the plan's success is still very much in question.

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One reason earlier reforms failed was that the government lost its commitment to strong measures under private-sector pressures. During his first month as president, Collor enjoyed the support of 80 percent of his countrymen, but his popularity is declining and congressional elections are coming up. Both houses of Congress supported the initial plan, but the second phase has met some opposition.

If successful, the reforms should reorient the long-run composition and performance of the country's agricultural sector. The resulting higher economic growth and gains in per capita income would lead to a rapid swelling in food demand. The agricultural sector likely will become more focused on exports, although export growth will hinge somewhat on improving Brazil's transportation system.

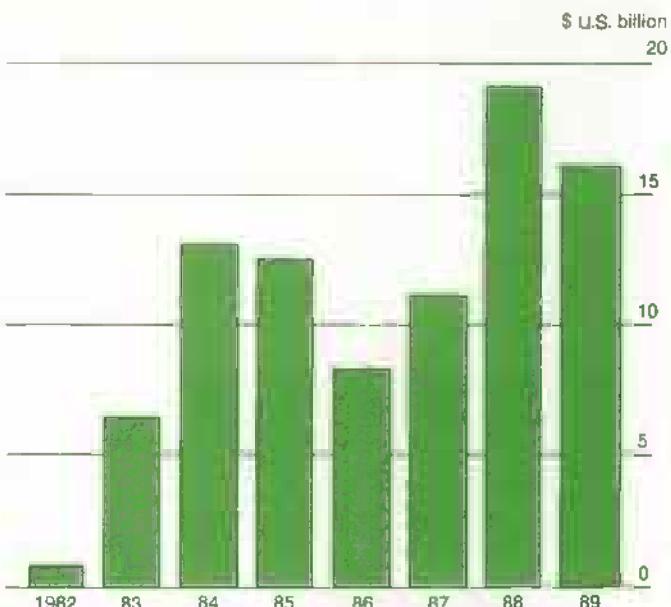
### Weather, Policy Shifted Production

In the 1980's, Brazil's agriculture generally tracked the modest success of the overall economy. In fact, recent history shows a close link between agricultural and economic performance as a whole. Agricultural growth, however, weakened relative to overall growth during 1986-87 due to the extreme drought of 1986.

The importance of agriculture to the economy has declined in the last two decades because of Brazil's rapid industrialization. Past economic cycles were driven by international markets for export commodities (such as sugar, coffee, and cocoa) because agriculture formed the country's economic base. Today, agriculture accounts for only about 10 percent of Brazil's domestic output, although it employs about 26 percent of the labor force.

While Brazil's agricultural production has grown during the past decade, the growth has not been distributed evenly across commodities. Policies to help pay Brazil's international debt

### Brazil's Trade Surplus Dips



Source: *International Financial Statistics*, International Monetary Fund, June 1990.

included tightening import restrictions, promoting domestic substitutes for imports, and expanding exports.

The policies caused shifts in agricultural production as resources were attracted to export-oriented commodities such as soybeans, poultry, and oranges, and to the commodities receiving heavy support to keep out imports—wheat and sugarcane for alcohol, a substitute for imported petroleum (see the June AO for more on Brazil's sugar industry). Brazil is second only to the U.S. in soybean exports and is accounting for about 14 percent of global exports in 1989/90.

Wheat and sugarcane production grew the most during the 1980's, and received the most government support and regulation. Wheat area actually declined during the decade, but yields more than doubled, boosting output more than 50 percent.

Production of Brazil's main export commodities—poultry, soybeans, oranges (orange juice), and coffee—also soared in the 1980's. The expansion was fueled by several factors: higher world prices (for orange juice), export and credit subsidies, the 1983 currency devaluation, and the security of producing goods marketable both at home and abroad during a time when the domestic market was highly unstable.

Moreover, exporters of processed commodities, such as soybean oil and meal, received tax credits. As the domestic economic situation became increasingly unstable, producers exhibited a strong preference for export commodities.

Corn, rice, and dry beans received greater support during the 1980's as the shift towards democracy increased the pressure on the government to insure adequate domestic food supplies at stable prices. The subsidized production credit programs were

### Brazil Promoted Crops To Boost Exports And Cut Imports\*

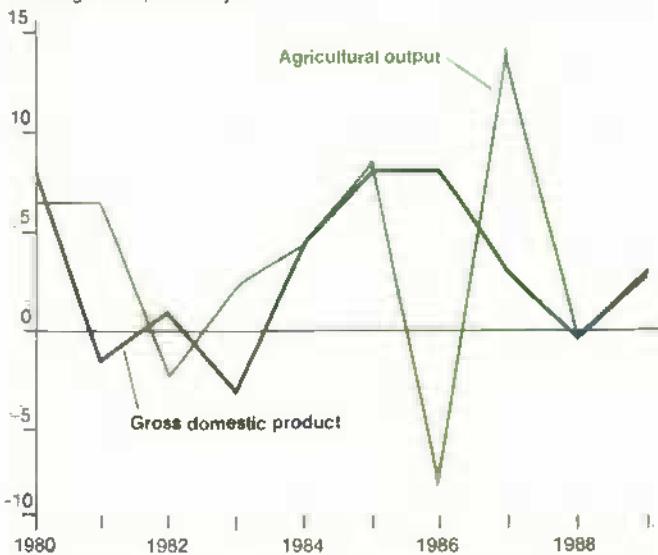
Crop	1979/80- 1980/81	1988/89- 1989/90	Percent change
1,000 metric tons			
Wheat	2,778	5,675	51.1
Sugarcane	125,500	219,500	42.8
Poultry	1,211	2,064	41.3
Dry beans	2,077	2,731	31.5
Soybeans	15,178	21,350	28.0
Oranges**	175	230	23.9
Coffee	2,394	2,820	17.8
Cotton (annual)	601	707	15.1
Corn	21,385	25,275	15.4
Cocoa	328	373	13.8
Beef and veal	2,125	2,450	13.3
Irrigated rice	6,124	6,868	9.5

\*Two-season averages. \*\*Million 90-pound boxes.

Sources: Coffee, sugarcane, dry beans and cocoa data from the Instituto Brasileiro Geográfico e Estatístico. Other data are USDA estimates.

### Agriculture and General Economy Often Move In Tandem In Brazil

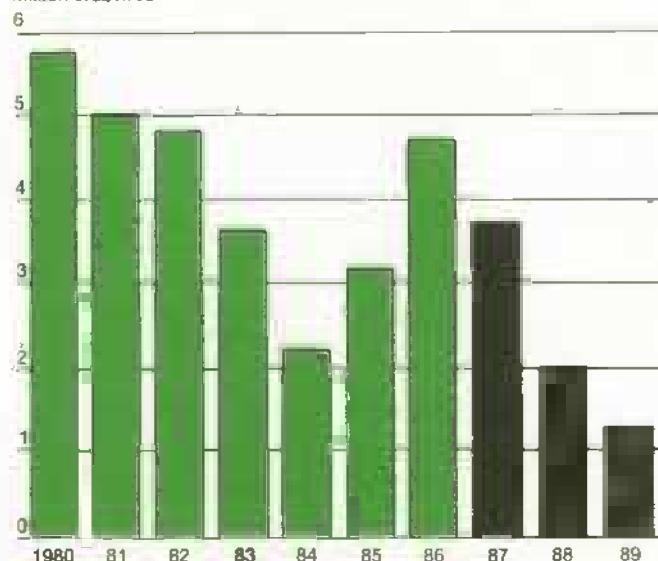
% change from previous year



Agricultural growth in 1986 and 1987 was affected by severe drought in 1986.

### Brazil's Subsidized Agricultural Credit Fell for Last 3 Years

Million cruzeiros



Adjusted for inflation. 1988 and 1989 preliminary.

Source: CFP, *Informe Estatístico*, 4 (4), July/August 1989.

redesigned to give more support to medium and small farmers, the main producers of these three crops. Real minimum support prices for these domestic food crops also were raised in 1986.

But even with increased support in the mid-1980's, growth in corn and rice output lagged behind other sectors. Traditionally

a corn exporter, Brazil became a net importer as corn lost area to soybeans in the late 1980's and growth in poultry production caused domestic corn demand to expand faster than output.

Instances of prohibiting exports of beef, cotton, and corn—commodities traditionally produced for both domestic and export markets—have damped output by increasing price risk. As a result, exports of these commodities dropped. And, corn and cotton are increasingly viewed as crops for domestic consumption. Output growth for cocoa, another traditional export, suffered from low international prices.

### Credit Drives The Outlook

Since 1986, restrictive fiscal and monetary policies have affected the agricultural sector, but only recently has total production been curtailed. Cuts in government-supplied, subsidized agricultural credit during the last 2 crop years depressed area yields.

Unlike earlier credit reductions, the cuts arrived when interest rates on commercial loans were too high for farmers to finance production through market channels, and when input prices were rising faster than commodity prices. Largely as a result, the 1989/90 crops just harvested are estimated to be down 3.7 percent from a year earlier.

Collor's asset freeze in March arrived just as harvest of Brazil's summer crop had begun, slowing the harvest of the corn and cotton crops and pushing it to a period of bad weather. This lowered the crops' quality. Planting of the winter crop also was disrupted by the late approval of subsidized credit for wheat farmers. But, the government raised the wheat support price for the next harvest to about 25 percent above the world price, putting the brakes on the contraction in wheat output.

The outlook for crops now being planted remains unclear, but will be affected by the availability of government credit. While commercial interest rates are too high for production financing, Collor's continued success in controlling inflation would force down market interest rates, and perhaps reduce farmers' dependence on subsidized government credit. Brazil's first comprehensive farm bill is still being debated in Congress, and is way behind schedule.

Overall, the new reforms should reinforce farmers' export orientation. The continuing decline in the value of the cruzeiro makes Brazilian commodities more attractive on world markets. And because Brazil's economy shows signs of a recession, little domestic demand growth is expected, strengthening the shift towards exports.

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### Brazil's Economy In the 1980's

Brazil spent most of the 1980's adjusting to debt-related problems, escalating inflation, and the transition to a democratic government. Trade restrictions were tightened, government spending (including agricultural support) was cut, wages and prices were indexed to the general inflation rate, and the import-competing and export sectors were promoted to increase foreign exchange earnings. These earnings mostly went to help pay the debt.

But the government made little progress in solving the country's debt problems, stagnant real incomes, lagging investment, or inflation. By the beginning of 1990, external indebtedness exceeded \$111 billion, annual inflation hit 1,765 percent, and real incomes had fallen to 1978 levels.

Unemployment hit record lows, but only because of the growing underground economy. Indexation protected consumers and producers from inflation and allowed the underground economy to grow, but also created an inflationary cycle that could not be broken. Ten years of unsuccessful adjustments were costly to long-run development—public and private investment dropped sharply, capital flight accelerated, roads and utilities deteriorated, and real incomes declined.

To finance the ever-growing public debt, the government paid inflation-adjusted interest rates in excess of 34 percent in 1989. Private businesses found it irrational to invest in anything but the money market, resulting in a capital drain throughout the economy, including agriculture.

The emerging consensus is that most of Brazil's problems were caused by excessive government spending and the heavy reliance on indexation to deal with inflation. When the latest reforms were introduced this March, inflation had reached an annualized rate of 4,854 percent. Indexation was failing and the economy had slipped out of control.

### Transportation Is The Weak Link

One of the biggest problems Brazilian producers face is escalating transportation costs that reflect the country's crumbling infrastructure. Past government financial mismanagement, plus the financial constraints imposed by the large external debt, pushed down infrastructural investment and maintenance during the 1980's. Consequently, the transportation, phone, and electric systems have deteriorated to what has been called the "worst crisis of the century."

Rising business costs are making Brazilian industries less competitive in world markets. Even if Brazil's new government succeeds in renewing economic growth and enticing international and domestic capital back to the country, rebuilding will take time. Hydroelectric dam construction has been halted, the building of highways and railways suspended, and exporters are plagued by high-cost, inefficient ports.

By the end of 1987, only 80 percent of all domestic telephone calls were successfully completed. And the country could face electricity rationing by 1992. The road and rail system is shrinking, and according to Brazilian sources, the 1990 budget contains only one-sixth of the funds needed to maintain the current infrastructure.

Only 12 percent of Brazilian products are shipped by rail (one of the lowest percentages in the world), and inland water shipment is virtually unknown. Three-fourths of all agricultural output is transported by trucks; escalating freight costs were one of farmers' major complaints last year. Some analysts estimate that one-third of the roads are in precarious shape, and the previous Minister of Transportation said the transportation sector is on the verge of collapse.

Calculations made in 1989 show that soybeans cost \$32 a ton less to produce in Brazil than in the U.S., but freight costs make the at-port cost \$20 higher, according Brazilian sources. Obviously, rising transport costs affect those farmers who are farthest from markets, such as soybean producers of Mato Grosso and Mato Grosso do Sul. About a third of Brazil's soybeans come from these interior states.

The infrastructural problem will not improve until Brazil's economy improves, and then, only with a lag. First, deterioration of the current system must be halted, then unfinished projects completed, and finally, some semblance of a modern transportation, electric, and communication system must be achieved to enhance Brazil's competitiveness. [Emily McClain (202) 786-1662] AO

## A Fresh Look At the CRP

**A**s the end of the enrollment window for the Conservation Reserve Program (CRP) nears under current law, a reassessment of its economic impacts reveals substantial economic benefits tempered by increased government outlays.

Early in the program, before the 1988 drought, an economic analysis showed that a 45-million-acre CRP would generate net economic benefits of \$3.4-\$11 billion (in present value terms) over the life of the program (see box).

The gains would represent an increase in social welfare flowing from less soil erosion, enhanced water quality, improved wildlife habitat, greater timber supplies, and higher farm incomes. Incomes were expected to rise because less land would be used, cutting crop output and increasing prices. The costs would include higher food prices, outlays for establishing tree and grass cover, and technical assistance.

Net government outlays were estimated to increase by \$2.0-\$6.6 billion over the life of the program, according to the earlier assessment. The outlays would include CRP rental payments, bonuses for putting corn base acres into the reserve, the government's share of establishing ground cover, and technical assistance. Government savings would include lower commodity program payments and storage costs.

Now, enrollment stands at nearly 34 million acres, and the uneven weather of the past few years has reduced stocks and pushed up crop prices. Reestimating the effects of the CRP in light of these events, however, has served to tighten the range of net economic benefits to \$4.2-\$9 billion. But the estimates of net government outlays increased to \$6.6-\$9.3 billion. The drought pushed up commodity prices, lessening the commodity program savings that might otherwise have been attributed to the CRP.

These new estimates show that the CRP's effects depend not only on enrollment, but also on unanticipated events that affect the agricultural economy. And other unexpected developments over the coming years will also shift these estimates.

Moreover, it is not possible to estimate all of the social costs and benefits. For example, any long-term unemployment arising because farmers purchased fewer inputs, and benefits arising from improved groundwater quality, were excluded. Not only are such effects difficult to quantify, they are believed to be small on a national level.

Title XII of the Food Security Act of 1985 (P.L. 99-198) authorized the CRP, the current centerpiece of USDA's agricultural conservation efforts. Under this voluntary program, USDA



pays farmers to retire highly erodible or environmentally sensitive cropland for 10 years. Cropland enrolled in the CRP is planted with grass or trees, or converted to other conservation uses.

The CRP's impacts are estimated here relative to a benchmark situation characterized by 1) the absence of a CRP, and 2) the assumption that acreage set aside by other supply control programs, such as acreage reduction programs (ARP's) and paid land diversions (PLD's), would not have been higher without a CRP. Alternative supply control assumptions for the benchmark, such as higher ARP's to offset the absence of the CRP, would have resulted in different estimates.

### **CRP Boosts Farm Income**

Because most of the 33.9 million acres enrolled in the CRP would otherwise be in crop production, about 8 percent less cropland is available, so total production declines, and stocks shrink. Less output results in upward pressure on commodity prices and reduces purchases of agricultural inputs such as fertilizer.

However, the magnitudes of the production and price adjustments depend on several factors. First, farmers placing land into the CRP tend to enroll their least productive eligible cropland. So the cut in output is proportionately less than the reduction in acres.

Second, because farmers must also retire a portion of their commodity program base acreage as a condition of CRP participation, some of the land that is enrolled would otherwise be idled under the ARP's or PLD's. Third, as total production declines, prices of agricultural commodities rise, causing farmers to expand production. The net increase in commodity prices is moderated by this second-round response.

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Net returns to agricultural production change as total production declines, prices rise, and farmers receive CRP rental payments and incur costs to establish ground cover. Because the quantity demanded falls only slightly as prices go up for most agricultural commodities, constraining production pushes up farmers' total revenues.

Production costs fall because less land and other inputs are used. Thus, the CRP increases farmers' net returns. In addition to these market changes, CRP rental payments to farmers also increase net farm income, which is partially offset by the farmers' shares of the costs to establish groundcovers.

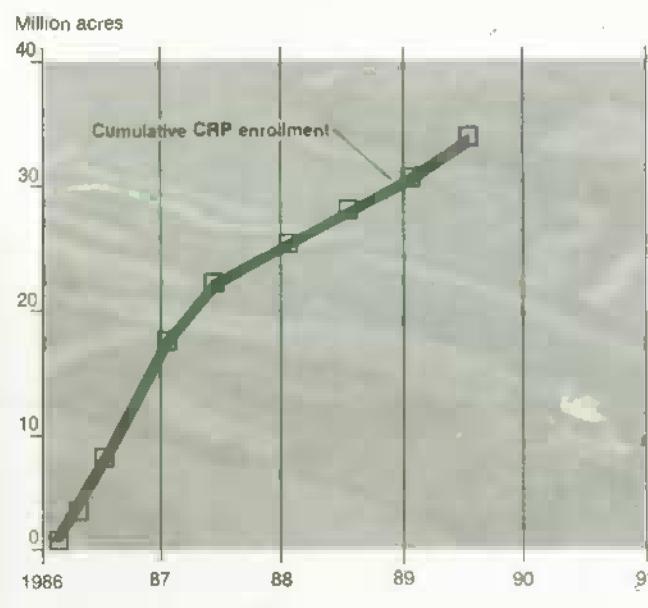
The present value of net farm income, excluding direct CRP rental payments and establishment-cost shares paid to farmers, is estimated to increase by \$2.1-\$6.3 billion over the life of the CRP. CRP rental payments, currently totaling \$1.7 billion per year, are adding another \$13 billion to farm income over the program's life. After 1995, when land initially enrolled in the CRP may come back into production, net farm income will begin to slide as crop prices drift down.

### New Timber Adds to Farmer Wealth

If land enrolled in the CRP is planted to trees, the net future harvest value of the trees increases the landowner's wealth. Nearly 2.2 million enrolled acres have been planted in trees. The majority is in the Southeast and Delta regions.

Over a 45-year period, an average acre of CRP trees will produce 7,400 cubic feet of commercial wood. Thus, 2.2 million

### CRP Stands at Nearly 34 Million Acres



acres may produce 16 billion cubic feet of wood over the same time span.

The present value of an acre of trees is estimated to be over \$2,040, while maintenance and harvesting costs are estimated to be \$210 per acre. The farmer's share of tree establishment costs has averaged about \$37 per acre. Assuming that 85 percent of CRP tree acres will be maintained until mature harvest, the present value of CRP trees is estimated to be \$3.3 billion.

These computations use a 4-percent discount rate, reflecting what farmers could have earned had they sold the land instead of putting it in the CRP and invested the proceeds in another business activity.

### Food Costs Up Slightly

Programs that restrict agricultural output push up the prices of agricultural commodities and tend to increase consumer food costs. However, a 1-cent increase in crop prices does not produce a 1-cent increase in consumer food costs. Farm prices comprise less than 30 percent of the average retail price of food.

Research shows that consumer food costs are increasing less than 1 percent in any year because of the CRP. But, in total, the present value of CRP-related increases in consumer costs is estimated to be \$2.9-\$7.8 billion over the program's life.

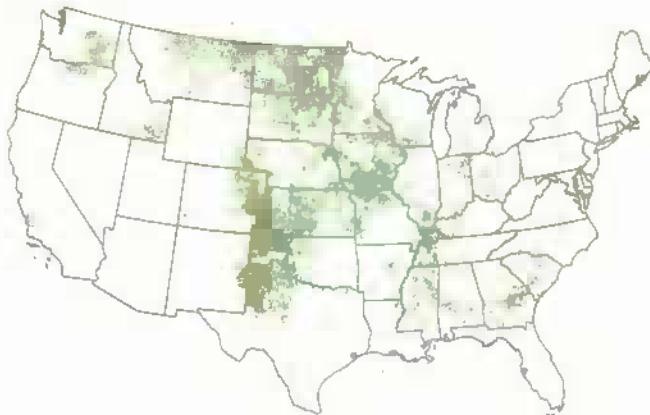
While current CRP enrollment accounts for 8 percent of cropland nationally, enrollment approaches 25 percent or more in some portions of the Plains and Mountain regions. Where high enrollment overlaps with economic dependence on crop production, regional and local economies are being forced to adjust. However, the actual effect of the CRP on regional economic activity is difficult to estimate.

In industries closely linked with agricultural production, economic activity declines due to CRP acreage increases and the subsequent contraction in crop production. So, income in industries associated with agricultural production (such as farm input distribution and food processing) will fall, leading to a decline in personal income and household consumption.

But, as a partial offset, local economic activity benefits from the increased farm income associated with CRP rental payments and higher farm receipts. To the extent that this increased farm income is being spent locally, regional economic employment and output will rise.

On the national level, CRP-induced changes in the agricultural processing, other manufacturing, and household sectors are negligible. But in the Northern Plains, total gross agricultural output is estimated to be 3.5 percent lower and farm input sales 2 percent lower. In the Southern Plains and Mountain regions, agricultural output is down by 3 and 2.5 percent. Sales of inputs in the two regions are estimated to drop 1 and 2 percent. Some counties in these regions probably are experiencing larger impacts.

CRP Enrollment Heavily Concentrated in the Northern and Southern Plains



One dot equals 1,000 acres. Total enrollment is 33.9 million acres.

## ***Soil & Water Quality Are Improving***

Five of the seven mandated goals of the CRP focus on protecting natural resources and environmental quality; reducing wind and water erosion is given as the primary goal. Estimates of natural resource effects vary with the regional distribution of cropland retired and cuts in erosion rates.

CRP erosion reductions are currently estimated to be 655 million tons per year, or about 21 percent of the erosion occurring on all cropland. The average savings are 19 tons per acre annually. Over time, excessive erosion reduces crop yields by lowering water-holding capacity and water infiltration rates and by swelling nutrient losses.

But conserving soil holds down long-run yield losses and helps contain fertilizer costs. Research indicates that soil productivity benefits for the 33.9 million acres currently enrolled in the CRP range from \$ 0.6 to \$1.7 billion, with \$1.2 billion as most likely.

Many areas of the U.S. experience low average rainfall, frequent drought, and relatively high winds. These conditions, combined with fine soils, sparse vegetative cover, and agricultural activity, lead to heavy wind erosion. Wind erosion contributes significantly to particulate air pollution in some regions of the arid Southwest and Great Plains.

In rural areas, wind erosion also can produce short-term particulate loads in excess of urban levels, resulting in higher maintenance and cleaning costs for households and businesses, damage to machinery, and adverse health effects.

It is difficult to develop reliable estimates of the economic benefits from reduced wind erosion. However, research suggests that these benefits range from \$ .3 to \$ .9 billion, with \$ .4 billion the most likely.

Agricultural production leaves a number of residuals that are often carried into waterways by runoff or into ground water by leaching. Once there, these residuals degrade municipal drinking water supplies and cut the recreational value of rivers and streams. The most common residuals include nutrients from chemical fertilizers and animal manure (primarily nitrogen and phosphorus), pesticides, and sediment.

The CRP benefits both surface and groundwater quality through reduced erosion and agrichemical use on cropland. Surface water quality also has benefited from the 49,000 acres of CRP filter strips that keep out residuals.

The value of improved surface water quality over the life of the CRP is estimated to be \$1.3-\$3.9 billion. However, per acre benefits vary widely among different regions depending on how much soil is retained, the strength of local demand for water services, and local nonfarm water pollution.

There is no method for valuing changes in groundwater quality, so the economic benefits of groundwater improvement attributable to the CRP were not estimated. However, the economic benefits probably are small.

Highly erodible cropland has high water runoff, carrying away soil particles with many of the excess agrichemicals that degrade groundwater quality. So, when water runs off the surface, it tends not to leach pollutants into groundwater. In addition, CRP enrollment is low in areas where groundwater is most vulnerable to agricultural pollution.

Wildlife often use grassy areas close to cropland for nesting cover, food, winter cover, and migration corridors. The new grassland habitat created by the CRP likely is boosting farmland wildlife populations. In addition, 1.7 million acres of CRP land contain special wildlife covers, including food plots and shallow water areas.

People who engage in wildlife-related recreational activities, such as hunting, directly benefit the most from these gains. The net present value of wildlife hunting benefits produced by the CRP are estimated to range between \$1.9 and \$3.1 billion.

## ***Rental Payments Are Largest Expense***

The CRP affects federal expenditures in two ways. First, there are the direct government costs of operating the program. These include rental payments, costs of establishing groundcover, corn bonus payments, and technical assistance costs. Second, there are government cost savings in the form of lower commodity program payments. These occur because

## Special Articles

### **Measuring Social Costs and Benefits**

This assessment of the CRP measures two effects: 1) the net economic effect that the CRP will have on social welfare, and 2) the program's net effect on government outlays.

Economic effects distinguish between changes in the nation's output and purely monetary exchanges. Some effects, such as increased food costs and the value of improved water quality, are changes in the physical quantity or quality of goods and represent what is termed social costs and benefits.

Other effects, including CRP rental payments and reduced government payments to farmers for commodity programs, do not represent changes in output. But they are adjustments in cash payments between sectors or regions of the economy. Due to the fundamental differences in these two types of effects, the overall economic impact of the CRP cannot be determined by simply combining the individual effects.

The net economic effect is sometimes referred to as the change in economic efficiency and is what is used in benefit-cost analysis. It includes only the effects of the CRP that change the value of real goods and services. To estimate the complete net economic effect of the CRP it would be necessary to estimate all product and service value changes that occur because of the program.

Economic benefits would include:

- improved environmental services,
- decreased costs of surplus commodity production and storage,
- increased future supplies of timber, increased farm income, and

- decreased costs of administering traditional conservation programs.

Economic costs attributable to the program would include:

- higher production costs from shifting cropping patterns,
- CRP administrative costs,
- the cost of establishing vegetative cover (both the government's and farmers' shares),
- the costs of technical assistance,
- output foregone because of the unemployment or underemployment of input, production, and marketing resources that cannot be used elsewhere in the economy, and
- increased consumer food costs.

As the article makes clear, it was not possible to calculate estimates for all of these effects.

The CRP's effect on net government outlays includes higher expenses for rental payments, corn bonus payments, the government's share of establishing cover, technical assistance, and other administrative costs.

Government savings include smaller outlays for commodity programs and conservation programs replaced by the CRP. Most of these outlays and savings represent adjustments to cash payments between taxpayers and the government, or between different government programs. They are only indirectly related to the net economic effects.

**CRP Acreage Concentrated In the Plains and Mountain Regions, CRP Trees In the Southeast**

Region	Number of contracts	Acres enrolled	Acres planted in trees	Acres of reduced commodity base	Average rental payment	Average erosion reduction
Thousands						
Northeast	5.5	200	9	70	\$59.62	13
Appalachian	26.0	1,060	140	530	53.83	26
Southeast	31.4	1,570	1,207	730	42.60	15
Delta States	16.3	1,090	625	430	43.93	19
Com Belt	80.1	4,730	63	2,650	73.04	18
Lake States	47.2	2,630	97	1,630	58.54	16
N. Plains	73.4	9,430	8	6,480	45.94	15
S. Plains	26.6	5,080	19	4,090	40.19	32
Mountain	20.3	6,440	4	4,020	39.73	19
Pacific	6.5	1,700	6	1,140	49.29	13
Total	333.4	33,920	2,179	21,760	48.93	19

nearly 22 million acres of commodity program base acres have been retired as a condition of CRP enrollment and because higher commodity prices caused by the CRP have reduced deficiency payments.

The present value of direct program costs is estimated to be \$14.6 billion over the life of the CRP. Rental payments are the largest component at \$13 billion. On a per acre basis, rental payments average nearly \$49 per year.

Commodity program savings are estimated to be \$5.3-\$8 billion, but are very sensitive to the benchmark scenario assumptions concerning the level of supply control that would have existed without the CRP. For example, commodity program cost savings would have been much smaller under a benchmark scenario in which ARP and PLD requirements were expanded to achieve an equal degree of supply control.

### What Does The Future Hold?

Policymakers currently are considering the immediate future of the CRP under proposals for the 1990 farm bill. Proposals now being debated in the Senate and House would extend the CRP enrollment period through the 1995 crop year. The proposals significantly target additional acres to heighten protection of wetlands and ground- and surface-water quality.

Including existing CRP enrollment, total enrollment would not exceed 40-50 million acres under the proposals. USDA has not conducted any CRP signups since August 1989 in anticipation of such changes.

Land currently enrolled in the CRP will remain out of crop production at least until 1996. At that time, contracts on the land enrolled in 1986 will expire and the annual rental payments made by USDA will end. Because farmers will not be obligated to maintain the CRP conservation covers after contracts expire, most CRP land is likely to revert to crop production if prices and commodity programs are favorable.

When CRP land is returned to crop production, some of the environmental benefits produced by the program will be curtailed or discontinued. However, the majority of the land will be subject to the conservation compliance provisions of the 1985 Food Security Act. This may limit the losses due to erosion, and to a lesser extent, losses to surface water quality.

In the next few years, policymakers will consider ways to preserve the CRP's environmental benefits after existing contracts expire, including contract renewals, land purchases, or long-term or permanent easements. [Tim Osborn and Kazim Konyar (202) 780-1403] 

*For more on the early estimates of the CRP's impacts see The Conservation Reserve Program: An Economic Assessment, AER-626. To order, call 1-800-999-6779—Ed.*

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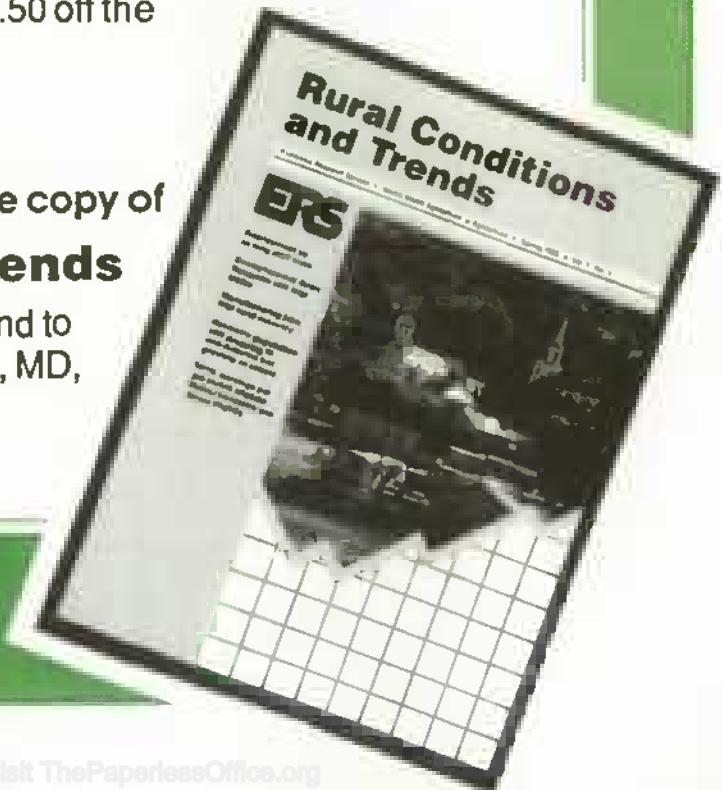
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# Statistical Indicators

## Summary Data

**Table 1.—Key Statistical Indicators of the Food & Fiber Sector**

	1989				1990				
	II	III	IV	Annual	I	II	III F	IV F	Annual F
Prices received by farmers (1977=100)	148	145	147	148	152	152	143	139	146
Livestock & products	156	159	165	160	171	172	161	156	163
Crops	140	130	127	134	132	132	125	122	127
Prices paid by farmers, (1977=100)									
Production items	186	186	185	185	168	169	—	—	189
Commodities & services, interest, taxes, & wages	177	178	178	177	180	183	—	—	182
Cash receipts (\$ bil.) 1/	181	184	155	158	171	169	171	148	182-186
Livestock (\$ bil.)	82	82	88	84	94	84	82	81	84-87
Crops (\$ bil.)	79	82	87	74	76	85	88	86	77-81
Market basket (1982-84=100)									
Retail cost	124	125	127	125	133	—	—	—	—
Farm value	108	107	108	107	118	—	—	—	—
Spread	133	135	137	134	141	—	—	—	—
Farm value/retail cost (%)	30	30	30	30	31	—	—	—	—
Retail prices (1982-84=100)									
Food	125	126	127	125	131	131	—	—	—
At home	124	125	126	124	132	131	—	—	—
Away from home	127	128	130	127	131	132	—	—	—
Agricultural exports (\$ bil.) 2/	9.8	8.8	10.8	39.7	10.3	8.8	8.8	—	40.0
Agricultural imports (\$ bil.) 2/	5.5	5.0	5.4	21.5	5.9	5.4	4.8	—	22.0
Commercial production									
Red meat (mil. lb.)	9,871	9,848	10,105	39,418	9,581	9,539	9,884	10,019	38,823
Poultry (mil. lb.)	5,538	5,704	5,727	22,039	5,611	5,950	6,035	6,050	23,648
Eggs (mil. doz.)	1,394	1,389	1,415	5,587	1,390	1,418	1,415	1,450	5,673
Milk (bil. lb.)	37.7	35.2	34.9	144.3	36.9	38.5	36.3	35.7	147.4
Consumption, per capita									
Red meat and poultry (lb.)	54.6	55.4	57.6	220.5	53.4	54.4	55.3	57.8	220.9
Corn beginning stocks (mil. bu.) 3/	5,203.9	3,419.0	1,930.0	4,259.1	7,079.2	4,813.0	2,838.4	—	1,930.4
Corn use (mil. bu.) 3/	1,785.8	1,489.3	2,379.0	7,260.2	2,267.0	1,973.9	—	—	—
Prices 4/									
Choice steers—Omaha (\$/cwt.)	73.85	70.09	72.46	72.52	77.20	77.52	70-74	71-77	73-77
Barrows & gilts—7 mkt. (\$/cwt.)	41.84	46.07	47.42	44.03	48.45	59.00	59-63	49-55	53-57
Broilers—12-city (cts./lb.)	67.1	59.7	49.8	59.0	56.5	56.6	57-61	48-54	54-58
Eggs—NY gr. A large (cte./doz.)	75.2	81.5	92.6	81.9	87.8	74.6	62-66	61-87	71-75
Milk—all at plant (\$/cwt.)	12.27	13.27	15.47	13.56	14.87	13.50	13.20-	14.00-	13.80-
Wheat—KC HRW ordinary (\$/bu.)	4.44	4.31	4.34	4.35	4.16	—	14.20	15.00	14.40
Corn—Chicago (\$/bu.)	2.78	2.49	2.36	2.55	2.42	—	—	—	—
Soybeans—Chicago (\$/bu.)	7.39	6.71	5.70	6.70	5.70	—	—	—	—
Cotton—Avg. spot mkt. (cts./lb.)	63.1	68.6	67.1	63.7	65.1	—	—	—	—
	1983	1984	1985	1986	1987	1988	1989	1990 F	1991 F
Gross cash income (\$ bil.)	150.4	155.3	156.9	152.5	162.0	171.6	175	176-183	—
Gross cash expenses (\$ bil.)	113.5	118.6	110.2	100.7	107.5	114.4	121	121-124	—
Net cash Income (\$ bil.)	36.9	38.7	46.7	51.8	54.5	57.2	54	55-58	—
Net farm income (\$ bil.)	12.7	32.2	32.4	38.0	43.6	42.7	49	47-51	—
Farm real estate values 5/									
Nominal (\$ per acre)	788	801	713	840	599	632	667	693	714-721
Real (1977 \$)	472	459	395	346	317	322	325	322	317-320

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1990-91 values as of January 1. 1986-89 values as of February 1. 1982-85 values as of April 1. F = forecast. — = not available.

## U.S. and Foreign Economic Data

**Table 2.—U.S. Gross National Product & Related Data**

	Annual			1989				1990	
	1987	1988	1989	I	II	III	IV	I	R
	\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,524.3	4,880.6	5,234.0	5,113.1	5,201.7	5,281.0	5,340.2	5,433.1	
Personal consumption expenditures	3,010.8	3,235.1	3,471.1	3,381.4	3,444.1	3,508.1	3,550.6	3,629.4	
Durable goods	421.0	455.2	473.2	466.4	471.0	486.1	469.5	489.9	
Non durable goods	998.1	1,052.3	1,123.4	1,098.3	1,121.5	1,131.4	1,142.4	1,168.2	
Clothing & shoes	177.2	188.8	200.1	195.0	198.9	202.2	204.3	208.9	
Food & beverages	529.2	559.7	594.9	587.3	592.2	598.1	601.8	616.5	
Services	1,591.7	1,727.8	1,874.4	1,816.7	1,851.7	1,890.6	1,938.7	1,971.2	
Gross private domestic investment	699.9	750.3	773.4	769.8	775.0	779.1	770.1	752.9	
Fixed investment	670.6	719.8	746.3	742.0	747.6	751.7	744.0	764.6	
Change in business inventories	29.3	30.8	27.1	27.7	27.4	27.4	26.1	-11.7	
Net exports of goods & services	-112.6	-73.7	-47.1	-54.0	-50.6	-45.1	-38.8	-32.0	
Government purchases of goods & services	926.1	968.9	1,038.8	1,016.0	1,033.2	1,038.9	1,058.3	1,082.9	
1982 \$ billion (quarterly data seasonally adjusted at annual rates)									
Gross national product	3,853.7	4,024.4	4,144.1	4,108.8	4,132.5	4,162.9	4,174.1	4,193.4	
Personal consumption expenditures	2,513.7	2,598.4	2,689.6	2,641.0	2,653.7	2,690.1	2,693.7	2,704.3	
Durable goods	389.8	413.0	425.2	419.3	424.9	436.4	420.3	434.4	
Non durable goods	890.4	904.5	918.7	915.0	909.7	920.8	921.1	913.2	
Clothing & shoes	158.8	161.3	168.9	165.0	165.8	173.3	171.5	171.3	
Food & beverages	452.7	460.0	462.8	466.0	461.4	463.2	460.5	458.2	
Services	1,233.7	1,280.2	1,327.7	1,306.7	1,319.0	1,332.9	1,352.2	1,356.7	
Gross private domestic investment	674.0	715.8	720.7	721.1	719.8	724.6	717.3	705.4	
Fixed investment	650.3	687.9	698.8	696.6	700.7	702.7	695.1	709.0	
Change in business inventories	23.7	27.9	21.9	24.5	19.1	21.8	22.2	-3.6	
Net exports of goods & services	-115.7	-74.9	-52.6	-55.0	-51.2	-57.1	-47.2	-33.6	
Government purchases of goods & services	781.8	785.1	806.4	799.7	810.3	805.3	810.4	817.3	
GNP Implicit price deflator (% change)	3.2	3.3	4.1	4.0	4.8	3.2	3.2	5.4	
Disposable personal income (\$ bil.)	3,205.9	3,477.8	3,778.8	3,689.5	3,747.7	3,806.8	3,871.3	3,966.5	
Disposable per. income (1982 \$ bil.)	2,676.6	2,793.2	2,906.3	2,881.7	2,887.6	2,919.2	2,936.9	2,955.4	
Per capita disposable per. income (\$)	13,140	14,118	15,186	14,884	15,084	15,260	15,495	15,840	
Per capita dis. per. income (1982 \$)	10,970	11,337	11,680	11,625	11,622	11,717	11,755	11,802	
U.S. population, total, incl. military abroad (mil.)	243.9	246.4	248.8	247.9	248.4	249.1	249.8	250.4	
Civilian population (mil.)	241.7	244.1	246.6	245.7	246.2	246.9	247.6	248.2	
	Annual			1989				1990	
	1987	1988	1989	May	Feb	Mar	Apr	May	
Monthly data seasonally adjusted									
Industrial production (1987=100)	100.0	105.4	108.1	108.3	108.5	109.0	109.0	109.7	
Leading economic indicators (1982=100)	140.1	142.8	144.9	144.2	143.8	145.2	145.1	146.2	
Civilian employment (mil. persons)	112.4	115.0	117.3	117.1	118.0	118.3	118.1	118.4	
Civilian unemployment rate (%)	6.1	5.4	5.2	5.1	5.2	5.1	5.3	5.3	
Personal income (\$ bil. annual rate)	3,777.6	4,064.5	4,427.3	4,396.3	4,637.9	4,674.8	4,688.8	4,700.8	
Money stock—M2 (daily avg.) (\$ bil.) 1/	2,913.2	3,072.4	3,221.0	3,085.3	3,252.4	3,266.2	3,271.5	3,263.6	
Three-month Treasury bill rate (%)	5.82	6.89	8.12	8.40	7.78	7.87	7.78	7.78	
AAA corporate bond yield (Moody's) (%)	9.38	9.71	9.26	9.57	9.22	9.37	9.46	9.47	
Housing starts (1,000) 2/	1,821	1,488	1,376	1,308	1,488	1,307	1,224	1,207	
Auto sales at retail, total (mil.)	10.3	10.6	9.9	10.3	9.5	9.5	9.8	9.3	
Business inventory/sales ratio	1.51	1.49	1.50	1.49	1.48	1.47	1.49	—	
Sales of all retail stores (\$ bil.)	128.5	137.5	144.5	144.7	149.9	149.3	147.9	P 146.8	
Non durable goods stores (\$ bil.)	80.5	85.2	90.7	90.7	94.9	94.6	94.2	P 93.7	
Food stores (\$ bil.)	25.8	27.2	29.1	29.1	30.3	30.4	30.7	P 30.4	
Eating & drinking places (\$ bil.)	12.8	13.8	14.5	14.4	15.2	15.2	15.0	P 14.9	
Apparel & accessory stores (\$ bil.)	6.6	7.1	7.6	7.6	7.8	7.9	7.7	P 7.9	

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. — = not available.

Information Contact: Ann Duncan (202) 786-3313.

**Table 3.—Foreign Economic Growth, Inflation, & Export Earnings**

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P	1990 F	1991 F	Average 1980-89
Annual percent change												
World, less U.S.												
Real GDP	1.5	1.3	2.4	3.7	3.3	3.1	3.3	4.0	3.0	2.5	3.3	2.9
Consumer prices	15.8	14.6	15.6	12.4	12.1	8.8	10.9	20.7	39.5	40.5	18.2	16.8
Merch. exports	-2.7	-6.7	-2.7	5.1	2.4	10.9	18.5	13.1	7.0	10.3	10.1	8.5
Developed, less U.S.												
Real GDP	1.1	0.8	2.2	3.8	3.4	2.7	3.4	4.4	3.8	3.2	3.2	2.8
Consumer prices	10.0	8.2	5.9	5.0	4.4	2.6	2.7	2.9	4.2	4.0	3.3	5.7
Merch. exports	-3.2	-4.4	-0.5	8.9	4.6	19.4	17.7	12.4	5.9	11.7	10.6	7.6
Developing												
Real GNP	2.0	2.1	2.2	4.0	3.9	4.0	3.8	4.1	3.0	3.2	4.5	3.4
Consumer prices	28.4	25.3	32.7	38.8	40.4	31.5	41.4	70.5	104.1	71.0	37.3	44.1
Merch. exports	-1.8	-10.4	-6.5	2.9	-1.7	-5.9	20.5	14.7	9.9	8.6	10.6	4.7
Asia, incl. China												
Real GDP	6.1	5.6	8.0	8.3	8.8	6.8	8.0	9.0	5.1	5.4	5.7	7.0
Consumer prices	9.3	8.4	8.8	8.9	7.2	5.8	7.4	11.8	10.1	8.2	10.4	8.4
Merch. exports	7.6	-0.5	4.8	14.6	-0.9	8.8	30.1	23.1	11.3	10.1	12.5	12.6
Latin America												
Real GDP	-0.4	-1.1	-2.8	3.4	3.5	4.0	2.9	0.3	0.9	1.4	4.2	1.7
Consumer prices	60.1	67.1	108.7	133.5	145.1	87.8	130.9	286.4	531.0	312.2	81.2	160.6
Merch. exports	6.5	-10.6	-1.0	6.7	-7.5	-14.6	9.1	16.8	9.8	6.7	7.4	4.5
Africa												
Real GDP	-1.9	2.0	-1.1	0.8	4.1	2.3	1.1	2.3	2.8	2.7	3.0	2.0
Consumer prices	23.4	13.1	17.9	20.8	13.2	14.3	14.7	19.3	20.2	13.4	9.7	17.1
Merch. exports	-19.7	-9.1	-8.0	3.4	0.0	-20.7	17.4	-8.0	15.4	5.1	7.7	0.5
Middle East												
Real GDP	2.7	1.3	1.7	-0.9	-0.2	-0.6	-0.8	3.8	3.9	3.2	3.4	1.1
Consumer prices	18.8	12.9	11.9	14.3	17.1	18.4	19.2	17.1	13.9	14.2	13.1	15.9
Merch. exports	-3.8	-21.1	-22.2	-10.5	-6.8	-19.2	16.8	0.6	28.6	6.5	7.7	-1.5
Eastern Europe, incl. USSR												
Real GDP	0.6	2.0	3.0	1.8	1.8	3.0	1.3	1.6	-3.5	-4.9	-2.6	1.5
Consumer prices	6.6	12.8	5.4	4.2	6.0	7.4	9.1	15.7	70.3	117.5	15.9	15.3
Merch. exports	9.1	1.3	3.7	1.8	0.2	8.2	11.2	0.3	-1.0	4.2	4.1	5.0

P = preliminary. F = forecast

Information contact: Alberto Jorardo, (202) 786-1705.

## Farm Prices

**Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average**

	Annual			1989			1990					
	1987	1988	1989	June	Jan	Feb	Mar	Apr	May R	June P		
1977=100												
Prices received												
All farm products	126	138	147	148	154	152	150	151	154	152		
All crops	106	127	134	138	136	133	128	131	134	130		
Food grains	103	138	156	156	151	145	143	142	139	130		
Feed grains & hay	85	120	128	131	120	120	123	129	136	134		
Feed grains	81	117	123	125	115	115	117	123	128	131		
Cotton	99	95	98	95	99	100	106	107	108	103		
Tobacco	129	138	136	143	144	144	144	147	147	147		
Oil-bearing crops	79	108	102	108	91	90	91	93	95	92		
Fruit, all	181	184	180	202	166	172	179	196	204	194		
Fresh market 1/	194	196	200	214	169	171	185	207	216	204		
Commercial vegetables	144	144	156	149	253	225	145	119	124	122		
Fresh market	147	137	146	144	242	210	132	106	113	108		
Potatoes & dry beans	120	124	187	215	184	192	210	235	235	232		
Livestock & products	146	150	160	157	172	169	171	170	173	172		
Meat animals	163	158	174	172	185	188	190	193	199	197		
Dairy products	128	126	139	128	162	146	141	138	139	140		
Poultry & eggs	107	118	138	144	139	131	145	132	126	127		
Prices paid												
Commodities & services												
Interest, taxes, & wage rates	162	169	177	--	181	--	--	183	--	--		
Production items	147	157	165	--	168	--	--	189	--	--		
Feed	103	128	135	--	128	--	--	128	--	--		
Feeder livestock	179	192	184	--	205	--	--	213	--	--		
Seed	148	150	185	--	170	--	--	163	--	--		
Fertilizer	118	130	137	--	129	--	--	130	--	--		
Agricultural chemicals	124	125	132	--	133	--	--	141	--	--		
Fuels & energy	181	166	181	--	200	--	--	187	--	--		
Farm & motor supplies	145	148	155	--	158	--	--	156	--	--		
Autos & trucks	208	215	223	--	225	--	--	234	--	--		
Tractor & self-propelled machinery	174	181	193	--	189	--	--	201	--	--		
Other machinery	185	197	208	--	210	--	--	217	--	--		
Building & fencing	137	138	141	--	143	--	--	144	--	--		
Farm services & cash rent	147	148	158	--	183	--	--	163	--	--		
Int'l payable per acre on farm real estate debt	189	182	177	--	178	--	--	178	--	--		
Taxes payable per acre on farm real estate	144	148	152	--	156	--	--	156	--	--		
Wage rates (seasonally adjusted)	160	171	185	--	193	--	--	193	--	--		
Production items, interest, taxes, & wage rates	151	160	167	--	170	--	--	171	--	--		
Ratio, prices received to prices paid (%) 2/	78	82	83	84	86	84	83	83	84	83		
Prices received (1910-14=100)	578	633	673	674	705	693	686	689	703	693		
Prices paid, etc. (parity index) (1910-14=100)	1.110	1.167	1.220	--	1.246	--	--	1.259	--	--		
Parity ratio (1910-14=100) (%) 2/	61	54	55	55	55	--	--	55	--	--		

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly & will be published in January, April, July, & October. R = revised. P = preliminary. -- = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1989		1990					
	1987	1988	1989 P	June	Jan	Feb	Mar	Apr	May R	June P	
<b>CROPS</b>											
All wheat (\$/bu.)	2.57	3.72	3.72	3.85	3.71	3.58	3.49	3.49	3.40	3.15	
Rice, rough (\$/cwt)	7.27	8.83	7.25-7.50	7.05	7.40	7.52	7.50	7.31	7.21	7.03	
Corn (\$/bu.)	1.94	2.54	2.35-2.40	2.52	2.31	2.32	2.37	2.51	2.62	2.69	
Sorghum (\$/cwt)	3.04	4.05	3.75-3.64	3.90	3.58	3.54	3.70	3.89	4.04	4.19	
All hay, baled (\$/ton)	65.10	85.20	88.00	93.30	85.00	85.80	88.50	91.80	101.00	87.80	
Soybeans (\$/bu.)	5.88	7.42	5.70	7.05	5.65	5.57	5.65	5.82	5.96	5.75	
Cotton, upland (cts./lb.)	64.3	56.6	6/ 65.6	57.2	59.8	60.8	64.1	65.0	65.4	62.4	
Potatoes (\$/cwt)	4.38	6.02	6.85	8.63	7.15	7.40	8.30	9.53	9.52	9.27	
Lettuce (\$/cwt) 2/	14.80	14.70	12.80	13.40	10.30	7.15	7.88	8.32	8.50	6.16	
Tomatoes, fresh (\$/cwt) 2/	25.90	28.90	32.90	25.90	118.00	97.80	32.80	14.80	22.00	28.10	
Onions (\$/cwt)	12.50	9.75	11.80	12.90	11.60	15.70	19.80	19.40	13.60	11.20	
Dry edible beans (\$/cwt)	16.50	29.80	28.70	31.00	30.00	32.70	32.10	32.80	32.90	34.00	
Apples for fresh use (cts./lb.)	12.7	17.4	13.4	10.8	12.5	13.0	12.9	13.3	13.1	12.6	
Pears for fresh use (\$/ton)	227.00	358.00	332.00	491.00	349.00	389.0	420.00	415.00	469.00	557.00	
Oranges, all uses (\$/box) 3/	5.40	7.18	6.89	8.53	4.70	4.93	5.33	6.80	7.03	5.84	
Grapefruit, all uses (\$/box) 3/	4.96	5.43	4.49	3.79	4.62	4.68	6.23	8.19	9.06	10.08	
<b>LIVESTOCK</b>											
Beef cattle (\$/cwt)	61.37	66.80	69.68	67.80	73.70	74.60	74.20	74.60	74.40	74.20	
Calves (\$/cwt)	78.10	89.85	91.84	94.10	91.00	96.00	99.10	100.40	101.00	100.00	
Hogs (\$/cwt)	50.79	42.53	43.24	45.10	47.30	48.20	51.30	53.80	61.20	60.20	
Lambs (\$/cwt)	77.92	69.50	87.33	70.60	56.40	59.80	66.00	62.90	59.80	56.90	
All milk, sold to plants (\$/cwt)	12.54	12.28	13.56	12.40	15.70	14.40	13.70	13.40	13.50	13.80	
Milk, manuf. grade (\$/cwt)	11.37	11.15	12.38	11.30	14.20	12.50	12.20	12.40	12.70	12.00	
Broilers (cts./lb.)	28.3	34.0	36.0	42.2	30.7	33.5	36.4	33.2	35.2	34.1	
Eggs (cts./doz.) 4/	53.1	53.3	70.0	63.9	83.8	70.4	79.3	71.4	80.2	82.7	
Turkeys (cts./lb.)	34.3	37.3	40.0	43.8	35.9	33.7	37.2	37.0	38.2	38.2	
Wool (cts./lb.) 5/	91.7	138.0	122.4	134.00	65.8	70.6	83.4	92.6	99.5	93.4	

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Excludes Hawaii. 3/ Equivalent on-tree returns. 4/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 5/ Average local market price, excluding incentive payments. 6/ Weighted average of first 10 months of the season - not a projection for 1989/90. P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual		1989				1990				
	1989	May	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
			1982-84=100								
Consumer Price Index, all items	124.0	123.8	125.6	125.9	128.1	127.4	128.0	128.7	128.9	129.2	
Consumer Price Index, less food	123.7	123.5	125.4	125.6	125.8	126.7	127.3	128.1	128.4	128.7	
All food	125.1	124.9	126.5	126.9	127.4	130.4	131.3	131.5	131.3	131.3	
Food away from home	127.4	128.7	129.1	129.5	129.0	130.3	131.0	131.8	132.5	133.0	
Food at home	124.2	124.4	125.4	125.8	128.5	131.0	132.1	131.9	131.1	130.9	
Meats 1/	116.7	115.5	118.1	119.3	120.0	122.3	123.5	124.0	125.2	126.6	
Beef & veal	119.3	119.6	120.0	121.3	122.1	124.5	126.2	126.6	128.0	128.5	
Pork	113.2	110.1	114.9	116.8	117.2	119.7	121.0	121.0	121.8	125.5	
Poultry	132.7	137.3	131.2	126.8	127.8	128.6	130.5	134.8	132.1	132.3	
Fish	143.6	142.3	143.9	142.0	143.0	149.0	150.6	148.0	147.2	143.8	
Eggs	118.5	112.8	122.9	129.4	134.9	143.9	124.7	131.6	130.3	115.0	
Dairy products 2/	115.6	113.8	118.2	120.2	122.9	125.8	128.9	128.8	125.2	124.7	
Fats & oils 3/	121.2	121.6	121.6	121.0	121.6	123.5	123.4	124.2	124.3	125.0	
Fresh fruit	152.4	158.1	156.6	152.7	154.8	171.4	170.3	171.1	175.7	174.9	
Processed fruit	125.9	125.1	127.1	126.6	125.2	125.1	131.9	136.7	138.1	139.2	
Fresh vegetables	143.1	153.2	134.8	141.9	136.5	178.0	186.3	168.3	145.6	139.8	
Potatoes	153.5	164.0	139.8	135.0	140.0	150.1	180.1	170.8	187.3	187.4	
Processed vegetables	124.2	124.9	124.6	123.8	124.8	125.4	126.3	126.6	127.0	127.8	
Cereals & bakery products	132.4	131.5	135.0	135.3	136.1	136.9	137.4	137.6	138.9	139.3	
Sugar & sweets	119.4	118.1	121.3	120.7	121.1	122.5	122.9	123.0	123.6	124.4	
Beverages, nonalcoholic	111.3	111.5	111.8	111.2	111.0	112.4	113.3	113.1	112.4	112.7	
Apparel											
Apparel, commodities less footwear	117.1	119.3	121.8	121.1	117.6	114.6	119.0	124.9	126.2	124.5	
Footwear	114.4	114.9	117.8	118.6	114.7	113.1	114.5	118.9	118.6	118.5	
Tobacco & smoking products	164.4	161.1	168.8	168.6	171.9	174.1	175.0	175.1	175.6	178.7	
Beverages, alcoholic	123.5	123.1	125.2	125.6	125.8	126.2	128.9	127.8	128.2	128.9	

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 786-3313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1989		1990				
	1987	1988	1989	May	Dec	Jan R	Feb	Mar	Apr	May
	1982 = 100									
Finished goods 1/	105.4	108.0	113.5	114.2	115.4	117.6	117.4	117.0	117.0	117.7
Consumer foods	109.5	112.6	118.7	119.1	121.1	123.9	124.4	124.1	123.2	124.8
Fresh fruit	112.0	113.5	111.9	112.5	109.8	112.1	112.0	112.5	110.3	105.4
Fresh & dried vegetables	103.7	105.5	116.9	142.9	105.2	161.5	188.7	148.9	103.5	101.6
Dried fruit	95.0	99.1	103.0	102.3	106.3	104.9	106.9	106.9	106.3	105.2
Canned fruit & juice	115.3	120.2	122.6	122.1	123.4	124.3	126.6	127.5	127.6	127.7
Frozen fruit & juice	113.3	129.8	124.6	123.7	118.1	129.3	147.0	147.8	146.0	146.1
Fresh veg. excl. potatoes	99.0	100.4	104.2	140.4	88.4	164.0	199.2	138.6	74.8	78.0
Canned veg. & juices	103.5	108.3	118.6	119.1	118.0	117.9	117.9	118.0	119.1	118.5
Frozen vegetables	107.3	108.6	115.5	115.4	117.1	117.6	117.8	118.4	117.8	119.5
Potatoes	120.1	113.9	153.6	150.8	160.2	162.0	161.2	196.3	199.0	176.0
Eggs	87.8	88.6	119.6	107.0	141.3	154.8	114.0	128.9	127.9	95.3
Bakery products	118.4	126.4	135.4	134.4	138.4	138.7	139.9	140.2	140.4	140.6
Meats	100.4	99.9	104.8	103.7	108.4	110.6	111.1	111.5	114.4	120.1
Beef & veal	95.5	101.4	109.0	111.6	110.7	113.1	113.7	113.7	115.7	117.7
Pork	104.9	95.0	97.5	90.5	105.1	107.2	107.8	108.8	113.7	127.4
Processed poultry	103.4	111.6	120.8	133.0	110.2	107.1	111.2	117.8	114.4	119.2
Fish	140.0	148.7	144.6	149.3	138.2	148.5	156.4	180.6	162.0	175.9
Dairy products	101.6	102.2	110.6	105.6	121.4	120.5	117.1	115.0	115.1	116.7
Processed fruits & vegetables	108.8	113.8	120.0	119.8	120.4	122.4	125.7	126.6	126.8	127.1
Shortening & cooking oil	103.9	118.6	116.6	119.7	118.2	117.0	116.9	120.9	118.6	127.0
Consumer finished goods less foods	100.7	103.1	108.9	110.3	110.4	113.2	112.4	111.7	111.9	112.5
Beverages, alcoholic	110.3	111.8	115.2	116.6	114.6	115.5	116.4	117.7	117.3	117.6
Soft drinks	111.8	114.3	117.2	118.1	119.8	122.1	121.3	123.2	122.3	122.8
Apparel	108.3	111.7	114.5	114.0	115.7	116.8	117.2	117.0	117.1	117.0
Footwear	109.3	115.1	120.8	119.9	123.1	124.2	124.7	124.5	124.8	125.2
Tobacco products	154.6	171.9	194.9	167.4	209.6	212.3	214.1	212.5	212.5	218.0
Intermediate materials 2/	101.5	107.1	112.0	112.7	111.9	113.4	112.5	112.4	112.8	112.9
Materials for food manufacturing	100.8	106.0	112.7	112.5	115.5	115.5	114.9	115.8	117.3	120.5
Flour	92.9	105.7	114.6	118.1	113.6	113.4	112.9	110.6	112.4	111.3
Refined sugar 3/	106.4	108.9	118.3	118.9	122.0	122.4	121.9	122.5	123.4	122.4
Crude vegetable oils	84.2	116.6	103.4	115.0	97.9	100.2	102.6	113.7	113.8	125.5
Crude materials 4/	93.7	96.0	103.0	106.1	104.2	106.5	106.9	105.6	102.6	104.2
Foodstuffs & feedstuffs	96.2	106.1	111.1	114.9	112.6	113.5	114.4	115.2	114.8	116.7
Fruits & vegetables 5/	106.8	108.5	114.1	128.9	106.7	139.1	154.2	132.3	108.0	102.8
Grains	71.1	97.9	106.4	114.1	101.0	100.8	100.4	100.2	107.2	108.6
Livestock	102.0	103.3	106.0	107.4	110.5	110.7	112.7	116.5	117.4	120.0
Poultry, live	101.2	121.5	128.8	155.0	104.3	108.9	115.5	129.1	117.3	128.2
Fibers, plant & animal	106.4	98.4	107.8	108.1	106.3	104.8	108.7	114.7	118.7	121.9
Fluid milk	91.8	89.4	98.1	99.7	116.2	114.7	108.8	100.6	96.7	98.3
Oilseeds	99.2	134.0	123.6	137.5	106.7	106.1	104.8	107.2	108.0	110.5
Tobacco, leaf	85.7	87.2	93.9	93.7	93.7	93.7	93.7	93.7	93.7	95.7
Sugar, raw cane	110.2	111.9	115.5	113.8	117.5	118.9	117.9	119.0	120.7	119.5
All commodities	102.8	106.9	112.2	113.2	113.0	114.9	114.4	114.2	114.0	114.5
Industrial commodities	102.5	106.3	111.6	112.4	112.3	114.1	113.6	113.2	113.1	113.3
All foods 6/	107.8	111.5	117.8	118.3	119.9	122.8	123.3	122.9	122.1	124.1
Farm products & processed foods & feeds	103.7	110.0	115.3	116.8	116.6	118.3	118.5	118.7	118.4	120.2
Farm products	95.5	104.9	110.7	115.1	111.5	114.9	115.7	115.0	112.8	113.1
Processed foods & feeds 6/	107.9	112.7	117.8	117.9	119.3	120.2	120.0	120.8	121.4	123.9
Cereal & bakery products	112.6	123.0	131.1	130.8	133.0	133.2	133.7	133.9	134.5	135.1
Sugar & confectionery	112.6	114.7	120.1	119.6	121.0	121.1	121.2	122.0	122.9	122.7
Beverages	112.5	114.3	118.3	119.7	118.4	119.7	119.7	120.8	121.0	121.0

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). R = revised.

Information contact: Ann Duncan (202) 786-3313.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads.

	Annual			1989		1990				
	1987	1988	1989 P	May	Dec	Jan	Feb	Mar	Apr	May
Market basket 1/										
Retail cost (1982-84=100)	111.6	116.5	124.8	124.7	127.4	132.2	133.1	132.8	132.2	132.0
Farm value (1982-84=100)	97.1	100.5	107.3	108.0	110.5	118.0	117.9	118.3	113.5	113.5
Farm-retail spread (1982-84=100)	119.4	125.1	134.0	133.7	136.5	139.8	141.3	140.8	142.2	142.0
Farm value—retail cost (%)	30.5	30.2	30.1	30.3	30.4	31.3	31.0	31.2	30.1	30.1
Meat products										
Retail cost (1982-84=100)	106.6	112.2	118.7	115.6	120.0	122.3	123.5	124.0	125.2	126.8
Farm value (1982-84=100)	101.2	99.5	103.3	103.2	106.9	111.2	111.6	113.7	117.0	119.8
Farm-retail spread (1982-84=100)	118.3	125.2	130.4	128.3	133.4	133.7	135.7	134.5	133.8	133.5
Farm value—retail cost (%)	46.7	44.9	44.8	45.2	45.1	46.1	45.8	46.4	47.3	47.9
Dairy products										
Retail cost (1982-84=100)	105.9	108.4	115.8	113.8	122.0	125.8	128.9	126.8	125.2	124.7
Farm value (1982-84=100)	93.3	90.8	99.1	91.7	113.6	115.2	108.5	102.8	98.4	98.3
Farm-retail spread (1982-84=100)	117.5	124.7	130.9	134.2	131.4	135.6	143.9	149.0	149.9	150.9
Farm value—retail cost (%)	42.3	40.1	41.1	38.8	44.4	43.9	41.0	38.9	37.7	37.1
Poultry										
Retail cost (1982-84=100)	112.8	120.7	132.7	137.3	127.8	128.6	130.5	134.8	132.1	132.3
Farm value (1982-84=100)	93.8	110.2	118.2	143.5	96.7	100.8	107.1	116.7	107.9	113.9
Farm-retail spread (1982-84=100)	134.2	132.8	149.3	130.1	163.8	160.9	157.4	155.7	160.0	153.5
Farm value—retail cost (%)	44.8	48.9	47.7	55.9	40.5	41.9	43.0	46.3	43.7	48.1
Eggs										
Retail cost (1982-84=100)	91.5	93.8	119.5	112.6	134.9	143.9	124.7	131.8	130.3	115.0
Farm value (1982-84=100)	76.8	78.7	107.7	93.3	133.4	135.4	108.4	125.6	110.3	88.0
Farm-retail spread (1982-84=100)	117.9	123.9	137.7	147.2	137.6	159.1	153.9	142.3	166.2	163.5
Farm value—retail cost (%)	53.9	52.7	58.4	53.2	63.5	60.5	55.9	61.3	54.4	48.2
Cereal & bakery products										
Retail cost (1982-84=100)	114.8	122.1	132.4	131.5	136.1	138.9	137.4	137.8	138.9	139.3
Farm value (1982-84=100)	71.0	92.7	101.7	104.2	101.2	101.1	99.5	100.0	99.5	99.5
Farm-retail spread (1982-84=100)	120.9	128.2	136.7	135.3	141.0	141.9	142.7	142.8	144.4	144.9
Farm value—retail cost (%)	7.8	9.3	9.4	9.7	9.1	9.0	8.9	8.9	8.8	8.7
Fresh fruits										
Retail cost (1982-84=100)	135.6	145.4	154.7	157.3	158.6	177.3	172.5	172.8	179.1	179.4
Farm value (1982-84=100)	113.9	118.5	108.9	102.4	109.2	124.5	131.9	128.4	118.5	117.0
Farm-retail spread (1982-84=100)	145.7	158.7	175.8	182.7	181.4	201.7	191.3	194.2	207.1	208.2
Farm value—retail cost (%)	28.5	25.3	22.2	20.6	21.7	22.2	24.1	23.1	20.9	20.6
Fresh vegetables										
Retail costs (1982-84=100)	121.6	129.3	143.1	153.2	136.5	178.9	188.3	168.3	145.8	139.8
Farm value (1982-84=100)	112.0	105.8	124.0	135.0	118.0	197.4	207.6	187.8	125.7	114.3
Farm-retail spread (1982-84=100)	128.5	141.3	152.9	162.8	146.0	166.4	175.3	158.4	155.9	152.9
Farm value—retail cost (%)	31.3	27.8	29.4	29.9	29.4	37.9	37.8	37.9	29.3	27.8
Processed fruits & vegetables										
Retail cost (1982-84=100)	109.0	117.6	125.0	124.9	124.9	125.1	129.4	132.2	133.2	134.1
Farm value (1982-84=100)	111.1	138.6	134.8	132.7	130.5	136.5	148.4	149.0	151.9	154.9
Farm-retail spread (1982-84=100)	108.3	111.7	122.0	122.5	123.1	121.8	124.1	128.8	127.4	127.8
Farm value—retail costs (%)	24.2	27.6	25.8	25.3	24.8	25.9	26.9	26.8	27.1	27.5
Fats & oils										
Retail cost (1982-84=100)	108.1	113.1	121.2	121.6	121.6	123.5	123.4	124.2	124.3	125.0
Farm value (1982-84=100)	74.1	103.0	95.7	107.0	93.0	93.0	96.7	108.0	106.3	115.3
Farm-retail spread (1982-84=100)	120.8	118.8	130.5	128.9	132.1	134.7	133.2	130.1	130.9	128.8
Farm value—retail cost (%)	18.8	24.5	21.2	23.7	20.8	20.3	21.1	23.4	23.0	24.8
	Annual			1989		1990				
	1987	1988	1989 P	May	Dec	Jan	Feb	Mar	Apr	May
Beef, Choice										
Retail price 2/ (cts./lb.)	242.5	254.7	269.9	271.9	274.4	281.3	281.5	281.5	285.4	287.0
Net carcass value 3/ (cts.)	145.3	153.9	160.8	167.7	165.9	168.7	167.9	169.2	170.9	170.3
Net farm value 4/ (cts.)	137.9	147.4	155.4	160.9	160.4	163.3	164.2	166.2	168.1	165.0
Farm-retail spread (cts.)	104.8	107.3	114.5	111.0	114.0	118.0	117.3	115.3	117.3	122.0
Carcass-retail 5/ (cts.)	97.2	100.8	109.3	104.2	108.5	112.6	113.8	112.3	114.5	118.7
Farm-carcass 6/ (cts.)	7.4	6.5	5.2	6.8	5.5	5.4	3.7	3.0	2.8	5.3
Farm value—retail price (%)	57	58	58	59	58	58	58	59	59	57
Pork										
Retail price 2/ (cts./lb.)	188.4	183.4	182.9	177.1	191.2	195.1	196.5	197.0	200.9	208.2
Wholesale value 3/ (cts.)	113.0	101.0	99.2	95.5	112.3	104.8	105.8	110.9	114.8	127.2
Net farm value 4/ (cts.)	82.7	69.4	70.4	68.4	76.5	78.6	78.4	83.3	86.1	99.5
Farm-retail spread (cts.)	105.7	114.0	112.5	108.7	111.7	118.5	118.1	113.7	114.8	108.7
Wholesale-retail 5/ (cts.)	75.4	82.4	83.7	81.6	78.9	90.3	90.9	86.1	86.1	79.0
Farm-wholesale 6/ (cts.)	30.3	31.6	28.8	27.1	32.8	28.2	27.2	27.8	28.7	27.7
Farm value—retail price (%)	44	38	38	39	42	39	40	42	43	48

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, & distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Prices for BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts, minus value of fat & bone byproducts. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of fat & bone byproducts. 5/ Charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contact: Denis Dunham (202) 786-1870, Larry Duewer (202) 786-1712.

Table 9.—Price Indexes of Food Marketing Costs

(See the June 1990 issue.)

Information contact: Denis Dunham (202) 786-1870. [ThePaperlessOffice.org](http://ThePaperlessOffice.org)

## Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Produc- tion 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
Million pounds 4/									
<b>Beef</b>									
1987	412 <sup>c</sup>	23,568	2,269	26,247	804	380 <sup>c</sup>	25,257	73.4	64.60
1988	386	23,589	2,379	26,354	680	422	25,252	72.3	69.54
1989	422	23,087	2,175	25,684	1,062	325	24,287	68.9	72.52
1990 F	335	22,930	2,158	25,421	1,150	325	23,946	67.3	73-77
<b>Pork</b>									
1987	248	14,374	1,195	15,817	109	347	15,382	59.1	51.60
1988	347	15,684	1,137	17,168	195	414	16,559	63.5	43.39
1989	414	15,813	896	17,123	288	285	18,570	63.2	44.03
1990 F	285	15,398	945	16,626	274	376	15,977	60.4	53-57
<b>Veal 5/</b>									
1987	7	429	24	460	7	4	449	1.5	78.05
1988	4	398	27	427	10	5	412	1.4	89.85
1989	5	355	0	360	0	4	356	1.2	91.84
1990 F	4	310	0	314	0	4	310	1.0	97-101
<b>Lamb &amp; mutton</b>									
1987	13	315	44	372	1	8	363	1.3	78.09
1988	8	335	51	384	1	8	387	1.4	68.26
1989	0 <sup>c</sup>	347	63	416	2	8	406	1.5	67.32
1990 F	8	369	50	427	2	7	418	1.5	57-61
<b>Total red meat</b>									
1987	679	38,684	3,532	42,895	721	745	41,430	135.9	—
1988	745	40,004	3,594	44,343	888	847	42,610	138.6	—
1989	847	39,802	3,134	43,583	1,332	632	41,619	134.7	—
1990 F	632	39,005	3,151	42,788	1,426	711	40,651	130.2	—
<b>Broilers</b>									
1987	24	15,587	0	15,620	752	25	14,844	60.8	47.4
1988	25	16,187	0	16,212	765	36	15,410	62.5	56.3
1989	36	17,428	0	17,484	859	38	16,587	66.6	59.0
1990 F	38	18,672	0	18,710	1,067	30	17,613	70.2	54-58
<b>Mature chicken</b>									
1987	183	638	0	801	15	188	598	2.5	—
1988	188	633	0	821	26	157	639	2.6	—
1989	157	575	0	731	24	189	518	2.1	—
1990 F	189	590	0	779	27	180	572	2.3	—
<b>Turkeys</b>									
1987	178	3,832	0	4,011	33	266	3,712	15.2	57.8
1988	266	3,960	0	4,228	51	250	3,928	15.9	61.5
1989	250	4,278	0	4,526	40	238	4,250	17.1	66.7
1990 F	236	4,643	0	4,879	45	260	4,574	18.2	60-64
<b>Total poultry</b>									
1987	365	20,068	0	20,433	800	479	19,154	78.5	—
1988	479	20,780	0	21,259	842	442	19,975	81.1	—
1989	442	22,280	0	22,722	923	463	21,335	85.8	—
1990 F	463	23,905	0	24,368	1,140	470	22,758	90.7	—
<b>Red meat &amp; poultry</b>									
1987	1,044	58,752	3,532	63,328	1,521	1,224	60,583	214.4	—
1988	1,224	60,784	3,594	65,601	1,728	1,289	62,584	219.6	—
1989	1,289	61,882	3,134	66,305	2,256	1,095	62,954	220.5	—
1990 F	1,095	62,910	3,151	67,156	2,566	1,181	63,409	220.9	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .71 for 1987, & .70.5 for 1988-90.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Information contact: Polly Cochran, or Maxine Davis (202) 786-1284.

Table 11.—U.S. Egg Supply & Use<sup>1</sup>

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		
								Million dozen		Wholesale price <sup>a</sup>
								Total	Per capita	
1985	11.1	5,710.1	12.7	5,733.9	70.6	548.1	10.7	5,104.5	255.9	66.4
1986	10.7	5,766.3	13.7	5,790.7	101.6	566.6	10.4	5,111.9	253.8	71.1
1987	10.4	5,868.2	5.6	5,884.2	111.2	599.1	14.4	5,159.5	253.8	81.6
1988	14.4	5,783.5	5.3	5,803.2	141.8	605.9	15.2	5,040.3	245.6	82.1
1989	15.2	5,586.8	25.2	5,627.1	91.6	641.6	10.7	4,983.3	235.7	81.9
1990 F	10.7	5,673.3	7.9	5,691.8	90.4	677.3	10.0	4,914.2	235.1	71-75

<sup>a</sup> Cartoned, grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

	Pro- duc- tion	Commercial			Total commer- cial supply	CCC net re- movals	Commercial			All milk price 2/
		Farm use	Farm market- ings	Beg. stock	Im- ports		Ending stocks	Disap- pear- ance		
		Billion pounds								
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.6	2.4	137.2	4.6	2.6	144.4	16.8	5.2	122.4	13.58
1984	135.4	2.8	132.4	5.2	2.7	140.4	8.8	4.9	126.8	13.48
1985	143.0	2.5	140.8	4.9	2.8	148.3	13.2	4.8	130.5	12.75
1986	143.1	2.4	140.7	4.8	2.7	148.1	10.8	4.2	133.3	12.51
1987	142.7	2.3	140.5	4.2	2.5	147.1	6.7	4.8	135.8	12.54
1988	145.2	2.2	142.0	4.6	2.4	150.0	8.9	4.3	136.8	12.24
1989	144.3	2.1	142.2	4.3	2.5	148.9	8.0	4.1	135.8	13.54
1990 F	147.4	2.1	145.3	4.1	2.5	151.0	7.1	4.0	140.2	14.10

<sup>1</sup>/ Milkfat basis. Totals may not add because of rounding. <sup>2</sup>/ Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry &amp; Eggs

	Annual					1989		1990							
	1987		1988		1989	May		Dec	Jan		Feb	Mar	Apr		May
	Federally inspected slaughter, certified (mil. lb.)	Wholesale price, (cts./lb.)	Price of grower feed (\$/ton)	Turkey-feed price ratio 1/	Stocks beginning of period (mil. lb.)	Broiler-type chicks hatched (mil.) 2/									
<b>Broilers</b>															
Federally inspected slaughter, certified (mil. lb.)	15,502.5	47.4	16,124.4	186	17,334.2	1,538.5	1,491.1	1,510.6	1,387.7	1,807.5	1,489.3	1,628.6			
Wholesale price, (cts./lb.)		56.3		220		59.0	70.4	48.4	51.7	57.4	60.4	55.3	57.0		
12-city (cts./lb.)						235	241	220	224	223	221	217	220		
Price of grower feed (\$/ton)						3.1	3.1	2.8	3.7	2.7	3.0	3.3	3.1	3.2	
Broiler-feed price ratio 1/						23.9	24.8	35.9	38.1	40.6	38.3	28.2	22.7	31.4	32.0
Stocks beginning of period (mil. lb.)						5,379.2	5,802.4	5,944.3	524.2	522.1	516.3	472.9	543.1	535.8	553.7
Broiler-type chicks hatched (mil.) 2/															
<b>Turkeys</b>															
Federally inspected slaughter, certified (mil. lb.)	3,717.1		3,923.4		4,174.8		356.9	334.9	319.0	297.8	366.8	328.1	379.7		
Wholesale price, Eastern U.S..															
8-16 lb. young hens (cts./lb.)		57.8		61.2		66.7	72.1	72.7	55.6	55.2	58.0	59.6	61.3		
Price of turkey grower feed (\$/ton)						213	243	252	249	248	239	241	240	239	239
Turkey-feed price ratio 1/						3.2	3.0	3.2	3.5	3.2	3.0	2.8	3.1	3.1	3.2
Stocks beginning of period (mil. lb.)						178.2	266.2	249.7	298.7	258.6	235.9	267.1	276.3	318.8	354.4
Poults placed in U.S. (mil.)						264.2	281.4	289.0	284	21.5	24.7	24.9	27.3	28.0	29.0
<b>Eggs</b>															
Farm production (mil.)	70,418		69,402		67,041		5,684	5,772	5,695	5,155	5,833	5,853	5,765		
Average number of layers (mil.)	284		277		269		267	271	272	272	271		270		
Rate of lay (eggs per layer on farms)															
Certified price, New York, grade A large (cts./doz.) 3/						61.6	62.1	81.9	73.7	99.6	92.4	79.6	91.5	82.4	87.0
Price of laying feed (\$/ton)						170	202	209	212	200	199	198	198	195	197
Egg-feed price ratio 1/						6.3	5.3	6.7	6.9	8.3	8.4	7.1	8.0	6.6	5.2
Stocks, first of month															
Shell (mil. doz.)						0.66	1.20	0.27	0.54	0.33	0.38	0.68	0.48	0.69	0.80
Frozen (mil. doz.)						9.8	13.1	14.9	11.6	10.2	10.3	10.8	11.5	12.7	13.1
Replacement chicks hatched (mil.)						428	368	384	38.6	29.3	32.0	32.2	38.4	37.2	37.7

<sup>1</sup>/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. <sup>2</sup>/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. <sup>3</sup>/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1989		1990					
	1987	1988	1989	May	Dec	Jan	Feb	Mar	Apr	May	
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.23	11.03	12.37	11.12	14.93	13.94	12.21	12.02	12.32	12.78	
<b>Wholesale Prices</b>											
Butter, grade A Chi. (cts./lb.)	140.2	132.5	127.8	131.0	120.0	110.8	108.3	108.3	106.9	99.0	
Am. cheese, Wis., assembly pt. (cts./lb.)	123.2	123.8	138.8	123.9	162.2	152.3	131.8	130.7	140.5	145.7	
Nonfat dry milk (cts./lb.) 2/	79.3	80.2	105.5	84.5	128.0	88.2	82.3	88.6	104.3	125.4	
<b>USDA net removals</b>											
Total milk equiv. (mil. lb.) 3/	8,706.0	8,856.2	8,967.9	1,468.3	463.4	1,490.9	1,244.9	936.7	974.5	1,014.2	
Butter (mil. lb.)	187.3	312.8	413.4	66.4	22.1	71.8	59.8	45.0	46.9	48.9	
Am. cheese (mil. lb.)	282.0	238.1	37.4	9.3	0	0	0	0	0	0	
Nonfat dry milk (mil. lb.)	559.4	267.5	0	0	0	2.8	-0.7	0	0	0	
<b>Milk</b>											
Milk prod. 21 States (mil. lb.)	121,431	123,518	122,531	11,027	10,047	10,479	8,813	10,997	10,842	11,226	
Milk per cow (lb.)	13,969	14,291	14,370	1,295	1,178	1,227	1,150	1,292	1,274	1,319	
Number of milk cows (1,000)	8,693	8,643	8,527	8,518	8,544	8,537	8,534	8,510	8,507	8,513	
U.S. milk production (mil. lb.)	142,709	145,152	144,252	8/ 12,972	8/ 11,860	8/ 12,372	8/ 11,565	8/ 12,083	8/ 12,762	8/ 13,215	
Stocks, beginning											
Total (mil. lb.)	12,887	7,440	8,189	11,891	9,606	8,795	9,294	9,819	10,851	11,410	
Commercial (mil. lb.)	4,165	4,646	4,289	5,181	4,198	4,131	4,500	4,712	5,008	5,145	
Government (mil. lb.)	8,702	2,794	3,900	6,709	5,410	4,604	4,785	5,107	5,643	6,264	
Imports, total (mil. lb.) 3/	2,490	2,394	2,499	160	285	193	194	195	253	—	
Commercial disappearance (mil. lb.)	135,754	136,805	135,843	10,886	11,589	10,521	10,173	11,766	11,733	—	
<b>Butter</b>											
Production (mil. lb.)	1,104.1	1,207.5	1,273.5	121.8	107.4	127.1	115.7	120.2	120.0	120.5	
Stocks, beginning (mil. lb.)	193.0	143.2	214.7	377.2	294.1	256.2	282.0	285.1	318.8	349.1	
Commercial disappearance (mil. lb.)	902.5	909.8	854.1	33.3	87.5	57.4	54.3	72.6	75.0	—	
<b>American cheese</b>											
Production (mil. lb.)	2,716.7	2,756.6	2,672.6	247.9	230.8	231.7	239.8	255.2	249.9	284.7	
Stocks, beginning (mil. lb.)	897.1	370.4	293.0	293.8	238.0	236.2	262.1	272.4	292.7	298.4	
Commercial disappearance (mil. lb.)	2,437.1	2,570.0	2,681.6	224.7	231.9	207.2	229.6	235.3	243.9	—	
<b>Other cheese</b>											
Production (mil. lb.)	2,827.7	2,815.4	2,841.3	253.2	258.7	252.1	232.1	274.8	265.1	280.8	
Stocks, beginning (mil. lb.)	92.0	89.7	104.7	118.9	95.4	93.2	99.3	103.8	104.0	112.7	
Commercial disappearance (mil. lb.)	2,880.2	3,034.5	3,208.9	273.1	293.2	259.9	246.1	294.8	278.6	—	
<b>Nonfat dry milk</b>											
Production (mil. lb.)	1,056.8	979.7	874.7	97.8	64.8	61.4	71.2	77.4	90.0	85.1	
Stocks, beginning (mil. lb.)	888.8	177.2	53.1	100.8	32.5	49.5	49.4	58.8	61.8	62.8	
Commercial disappearance (mil. lb.)	492.9	734.3	873.0	97.4	48.7	58.7	64.3	75.3	88.9	—	
<b>Frozen dessert</b>											
Production (mil. gal.) 4/	1,280.7	1,248.0	1,214.0	119.6	77.1	79.5	85.4	103.9	104.1	114.2	
	Annual			1988			1989			1990	
	1987	1988	1989	IV	I	II	III	IV	I P	II P	
Milk production (mil. lb.)	142,709	145,152	144,252	35,262	36,445	37,702	35,188	34,917	36,940	38,542	
Milk per cow (lb.)	13,818	14,145	14,244	3,447	3,586	3,727	3,484	3,448	3,644	3,807	
No. of milk cows (1,000)	10,327	10,262	10,127	10,229	10,164	10,118	10,101	10,127	10,137	10,124	
Milk-feed price ratio 5/	1.84	1.58	1.64	1.89	1.56	1.48	1.63	1.92	1.83	1.87	
Returns over concentrate 5/ coste (\$/cwt milk)	0.52	0.05	10.08	0.86	0.69	0.86	0.92	12.18	11.32	10.20	

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Hard ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. — = not available.

Information contact: Jim Miller (202) 788-1770.

Table 15.—Wool

	Annual			1989			1990			
	1987	1988	1989	June	Jan	Feb	Mar	Apr	May	
U.S. wool price, (cts./lb.) 1/	265	438	370	365	294	287	287	284	275	257
Imported wool price, (cts./lb.) 2/	247	372	354	323	334	325	321	335	325	275
U.S. mill consumption, scoured 3/										
Apparel wool (1,000 lb.)	129,677	117,069	112,998	11,440	28,209	—	—	—	—	—
Carpet wool (1,000 lb.)	13,092	15,633	14,122	1,380	3,828	—	—	—	—	—

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis. Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. 3/ Beginning 1990 mill consumption reported only on a quarterly basis. — = not available.

Information contact: John Lawler (202) 788-1840.

Table 16.—Meat Animals

	Annual			1989		1990				
	1987	1988	1989	May	Dec	Jan	Feb	Mar	Apr	May
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	7,953	8,411	8,045	8,087	8,331	8,378	8,526	8,319	8,483	8,181
Placed on feed (1,000 head)	21,040	20,854	20,834	1,624	1,552	1,896	1,403	1,902	1,377	1,632
Marketings (1,000 head)	19,545	19,918	19,422	1,752	1,418	1,634	1,515	1,618	1,554	1,796
Other disappearance (1,000 head)	1,217	1,202	1,070	164	87	114	95	120	125	150
Beef steer-corn price ratio,										
Omaha 2/	41.0	31.5	30.3	29.4	32.8	34.2	34.0	32.8	31.1	29.3
Hog-corn price ratio, Omaha 2/	32.8	19.6	18.4	18.8	21.7	21.6	22.0	21.9	21.2	23.6
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha	64.80	69.54	72.52	74.52	75.21	76.73	78.61	78.16	79.36	77.57
Utility cows, Omaha	44.83	46.55	47.88	45.57	49.38	49.78	52.79	54.87	54.48	55.41
Choice vealers, S. St. Paul 3/	78.92	90.23	248.62	230.00	248.50	255.00	NQ	NQ	NQ	NQ
Feeder cattle										
Choice, Kansas City, 600-700 lb.	75.38	83.87	86.13	83.50	86.25	85.70	84.88	87.50	90.81	91.90
Slaughter hogs										
Barrows & gilts, 7-markets	51.00	43.30	44.03	42.37	49.33	47.94	48.51	51.91	54.11	62.18
Feeder pigs										
S. Mo. 40-50 lb. (per head)	46.00	38.06	33.63	34.24	36.21	44.58	54.41	63.19	64.87	56.80
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	78.09	68.26	67.32	73.56	60.83	54.80	60.38	63.69	54.75	53.70
Ewes, Good, San Angelo	38.62	38.88	38.58	38.95	39.42	38.30	38.47	38.81	36.50	33.25
Feeder lambs										
Choice, San Angelo	102.26	90.89	79.85	78.18	78.00	72.10	74.88	75.83	71.31	64.30
Wholesale meat prices, Midwest										
Choice steer beef, 600-700 lb.	97.24	103.34	107.78	112.62	111.41	113.30	112.80	113.85	114.70	114.34
Canner & cutter cow beef	85.26	87.77	94.43	89.74	100.73	99.89	100.95	102.04	100.61	101.29
Pork loins, 14-18 lb. 4/	108.23	97.49	101.09	98.95	107.28	101.36	107.75	117.26	120.68	136.06
Pork bellies, 12-14 lb.	63.11	41.25	34.14	29.11	42.23	48.65	42.53	42.80	52.60	61.48
Hams, skinned, 14-17 lb.	80.96	71.03	69.39	63.30	78.89	68.44	76.50	79.00	77.33	NQ
All fresh beef retail price 5/	212.64	224.81	238.97	239.44	245.38	247.81	249.14	249.10	252.88	251.52
Commercial slaughter (1,000 head)*										
Cattle	35,647	35,079	33,917	3,025	2,680	2,851	2,502	2,764	2,818	2,988
Steers	17,443	17,344	16,536	1,521	1,284	1,380	1,241	1,398	1,348	1,547
Heifers	10,906	10,764	10,406	908	789	829	769	834	771	894
Cows	6,610	6,337	6,316	540	558	806	446	481	448	490
Bulls & stags	689	844	659	56	48	56	48	51	51	58
Calves	2,815	2,506	2,172	163	172	181	150	171	132	142
Sheep & lambs	5,199	5,293	5,464	448	469	489	441	493	487	478
Hogs	81,081	87,705	88,693	7,480	7,233	7,605	6,820	7,454	6,959	6,976
Commercial production (mil. lb.)										
Beef	23,405	23,424	22,974	1,999	1,827	1,932	1,705	1,870	1,747	2,007
Veal	416	387	344	29	25	27	24	28	23	26
Lamb & mutton	309	329	341	28	31	32	29	32	31	31
Pork	14,312	15,623	15,750	1,341	1,288	1,359	1,215	1,328	1,247	1,256
	Annual			1989				1990		
	1987	1988	1989	I	II	III	IV	I	II	III
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	9,555	10,114	9,688	9,688	9,918	8,880	8,276	9,943	10,063	—
Placed on feed (1,000 head)	25,074	24,423	24,484	6,232	5,212	5,719	7,321	6,088	—	—
Marketings (1,000 head)	23,126	23,459	22,955	6,658	6,040	5,896	6,361	6,583	7/ 6,088	—
Other disappearance (1,000 head)	1,389	1,390	1,274	344	410	227	293	385	—	—
Hogs & pigs (10 States) 6/										
Inventory (1,000 head) 1/	39,730	42,875	43,210	43,210	41,655	44,020	45,200	42,200	40,190	42,930
Breeding (1,000 head) 1/	5,125	5,435	5,335	5,335	5,440	5,565	5,335	5,280	5,250	5,465
Market (1,000 head) 1/	34,605	37,240	37,875	37,875	36,215	38,455	39,865	36,920	34,940	37,465
Farrowings (1,000 head)	9,853	9,370	9,203	2,109	2,580	2,324	2,190	2,013	2,465	7/ 2,319
Pig crop (1,000 head)	68,955	72,268	71,807	16,441	20,309	18,187	16,890	15,748	19,533	—

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), & Sept.-Nov. (IV). 7/ Intentions. \*Classes estimated. NQ = not quote. — = not available.

Information contact: Polly Cochran (202) 786-1284.

## Crops & Products

**Table 17.—Supply & Utilization<sup>1,2</sup>**

	Area			Production 4/	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price 5/
	Set aside 3/	Planted	Harvested								
	Mil. acres	Bu./acre									
<b>Wheat</b>											
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	916	1,961	1,905
1986/87	21.0	72.1	60.7	34.4	2,092	4,018	413	780	1,004	2,197	1,821
1987/88	23.8	65.8	58.0	37.7	2,107	3,945	280	806	1,598	2,684	1,261
1988/89*	22.5	65.6	53.2	34.1	1,812	3,096	157	818	1,419	2,394	3.72
1989/90*	9.7	78.6	62.1	32.8	2,036	2,758	142	832	1,250	2,224	535
1990/91*	77.3	70.0	38.6	2,698	3,254	350	840	1,250	2,440	814	2.80-3.20
<b>Rice</b>											
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	—	6/65.8	58.7	124.6	77.3
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	—	6/77.7	84.2	161.9	51.4
1987/88	1.87	2.36	2.33	5,555	129.6	184.0	—	6/80.4	72.2	152.6	31.4
1988/89	1.09	2.83	2.90	5,614	159.9	185.4	—	6/83.2	85.8	168.6	6.83
1989/90*	1.21	2.73	2.69	5,749	154.5	185.9	—	6/85.2	77.0	162.2	23.7
1990/91*					180.0	168.7	—	6/87.4	76.0	163.4	25.3
<b>Corn</b>											
1985/86	5.4	63.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	8,496	4,040
1986/87	14.3	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882
1987/88	23.0	65.7	59.2	119.8	7,131	12,016	4,805	1,229	1,723	7,757	4,250
1988/89*	20.6	67.6	58.3	84.6	4,929	9,191	3,987	1,245	2,028	7,260	1,930
1989/90*	10.1	72.3	64.8	116.2	7,527	9,460	4,650	1,280	2,350	8,180	1,280
1990/91*					7,850	9,132	4,650	1,300	2,150	8,000	1,132
<b>Sorghum</b>											
1985/86	0.8	18.3	18.8	68.8	1,120	1,420	864	28	178	869	551
1986/87	3.0	15.3	13.9	67.7	838	1,480	535	12	198	748	743
1987/88	4.1	11.8	10.5	69.4	731	1,474	555	25	231	811	663
1988/89*	3.9	10.4	9.0	63.8	577	1,239	468	22	310	800	440
1989/90*	2.9	11.9	11.2	55.4	818	1,057	505	15	275	795	262
1990/91*					590	852	465	15	225	705	147
<b>Barley</b>											
1985/86	0.7	13.2	11.6	51.0	591	848	333	169	22	523	325
1986/87	2.1	13.1	12.0	50.8	811	944	298	174	137	808	336
1987/88	2.0	11.0	9.9	52.4	521	869	254	174	120	548	321
1988/89*	2.8	9.9	7.6	38.0	290	622	166	180	79	425	196
1989/90*	2.2	9.2	8.3	48.6	403	614	188	182	85	453	161
1990/91*			7.7	63.6	414	590	175	185	85	445	145
<b>Oats</b>											
1985/86	0.1	13.3	8.2	63.7	521	728	460	82	2	544	184
1986/87	0.6	14.7	6.9	58.3	386	603	395	73	3	471	133
1987/88	0.8	18.0	8.9	54.0	374	552	358	81	1	440	112
1988/89*	0.3	13.9	5.5	39.3	218	393	194	100	1	294	98
1989/90*	0.3	12.1	6.9	54.4	374	545	272	115	1	388	157
1990/91*			6.2	60.1	376	577	315	120	1	438	141
<b>Soybeans</b>											
1985/86	0	60.1	61.6	34.1	2,099	2,415	0	1,053	740	1,879	536
1986/87	0	60.4	58.3	33.3	1,940	2,476	0	1,179	757	2,040	436
1987/88	0	58.2	57.2	33.9	1,938	2,374	0	1,174	802	2,072	302
1988/89*	0	58.9	57.4	27.0	1,549	1,855	0	1,058	627	1,673	182
1989/90*	0	60.6	59.4	32.4	1,927	2,112	0	1,120	620	1,837	275
1990/91*		58.0		1,880	2,140	0	1,165	615	1,875	265	5.50-6.75
<b>Soybean oil</b>											
1985/86	—	—	—	—	11,617	12,257	—	10,053	1,257	11,310	947
1986/87	—	—	—	—	12,783	13,745	—	10,833	1,187	12,020	1,725
1987/88	—	—	—	—	12,874	8/ 14,895	—	10,830	1,873	12,803	2,082
1988/89*	—	—	—	—	11,737	8/ 13,987	—	10,591	1,861	12,252	1,715
1989/90*	—	—	—	—	12,535	8/ 14,300	—	11,800	1,500	13,400	900
1990/91*	—	—	—	—	12,960	8/ 14,050	—	11,900	1,300	13,200	850
<b>Soybean meal</b>											
1985/86	—	—	—	—	24,951	25,338	—	10,090	6,038	25,126	212
1986/87	—	—	—	—	27,758	27,970	—	20,387	7,343	27,730	240
1987/88	—	—	—	—	28,060	28,300	—	21,293	6,854	28,147	153
1988/89*	—	—	—	—	24,943	25,100	—	19,798	5,129	24,927	173
1989/90*	—	—	—	—	26,972	26,970	—	21,850	4,770	26,720	250
1990/91*	—	—	—	—	27,895	27,950	—	22,300	5,350	27,650	300

See footnotes at end of table.

Table 17.—Supply &amp; Utilization, continued

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price \$/
	Set Aside 3/	Planted	Harvested									
Cotton 10/		Mil. acres	Lb./acre							Mil. bales		
1985/86	3.6	10.7	10.2	630	13.4	17.6	—	6.4	2.0	8.4	0.4	58.50
1986/87	4.2	10.0	8.5	552	9.7	19.1	—	7.4	6.7	14.1	5.0	52.40
1987/88	4.0	10.4	10.0	706	14.8	19.8	—	7.6	6.0	14.2	5.8	64.30
1988/89*	2.2	12.5	11.9	619	15.4	21.2	—	7.8	6.2	13.9	7.1	58.60
1989/90*	3.5	10.6	9.5	619	12.2	19.3	—	8.4	7.9	16.2	3.0	65.80
1990/91*					15.0	18.0	—	7.8	7.3	15.1	3.0	—

\* July 13, 1990 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soymeal & soyoil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres. 1 metric ton = 2204.622 pounds. 38,743 bushels of wheat or soybeans, 39,367 bushels of corn or sorghum, 45,929 bushels of barley, 88,894 bushels of oats, 22,048 cwt of rice, and 4,564 480-pound bales of cotton. 3/ Includes diversion, PLK acreage reduction, 50-92, & D-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Average of crude soybean oil, Decatur. 8/ Includes 196 million pounds in imports for 1987/88, 138 million in 1989/90, 15 million in 1988/90, and 50 million in 1990/91. 9/ Average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. — = not available or not applicable.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1989		1990			
	1985/86	1986/87	1987/88	1988/89	May	Jan	Feb	Mar	Apr	May
<b>Wholesale prices</b>										
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	3.28	2.72	2.96	4.17	4.55	4.30	4.14	4.04	4.13	3.91
Wheat, DNS, Minneapolis (\$/bu.) 2/	3.25	2.62	2.92	4.25	4.50	NQ	NQ	NQ	NQ	NQ
Rice, S.W. La. (\$/cwt) 3/	16.11	10.25	19.25	14.85	15.40	15.40	15.65	15.40	15.85	15.80
<b>Wheat</b>										
Exports (mil. bu.)	915	1,004	1,592	1,424	97	83	91	109	91	—
Mill grind (mil. bu.)	703	755	753	778	61	63	64	67	62	—
Wheat flour Production (mil. cwt)	314	335	336	348	27	28	26	29	27	—
<b>Rice</b>										
Exports (mil. cwt, rough equiv.)	68.7	84.2	72.2	85.6	11.8	7.6	8.3	8.0	7.3	—
<b>Marketing year 1/</b>										
	1986/87	1987/88	1988/89	Sept-Nov	1988	1989				1990
Wheat Stocks, beginning (mil. bu.)	1,905	1,821	1,261	2,253.8	1,715.9	1,227.7	701.6	1,917.2	1,423.7	943.1
<b>Domestic use</b>										
Food (mil. bu.)	712	721	715	197.3	168.9	165.0	183.1	183.1	180.5	183.3
Seed, feed & residual (mil. bu.) 4/	485	365	280	17.6	-37.6	-2.8	273.1	-12.8	45.0	-61.7
Exports (mil. bu.)	998	1,598	1,419	329.0	360.5	368.0	360.9	328.6	258.7	534.0

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. — = not available. NQ = no quote.

Information contact: Ed Allen & Janel Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1989		1990			
	1985/86	1986/87	1987/88	1988/89	May	Jan	Feb	Mar	Apr	May
<b>U.S. price, SLM,</b>										
1-1/16 in. (cts./lb.) 2/	60.0	53.2	63.1	57.7	63.7	62.2	65.0	68.1	71.3	74.8
<b>Northern Europe prices</b>										
Index (cts./lb.) 3/	48.9	62.0	72.7	66.4	77.3	74.9	76.9	79.2	83.0	86.9
U.S. M 1-3/32 in. (cts./lb.) 4/	64.8	61.8	76.3	69.2	78.9	74.3	77.0	80.2	84.6	88.9
<b>U.S. mill consumpt. (1,000 bales)</b>										
Exports (1,000 bales)	6,399	7,452	7,617	7,782	771	724	663	728	883	777
Stocks, beginning (1,000 bales)	4,102	9,348	5,026	5,771	11,207	12,860	11,290	9,965	8,241	8,824

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) Index: average of five lowest priced of 11 selected growths. 4/ Memphis territory growths. — = not available.

Information contact: Scott Sanford (202) 786-1840.

**Table 20.—Feed Grains**

	Marketing year 1/				1989		1990			
	1985/86	1986/87	1987/88	1988/89	May	Jan	Feb	Mar	Apr	May
<b>Wholesale prices</b>										
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.35	1.84	2.14	2.88	2.77	2.36	2.41	2.50	2.72	2.83
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	3.72	2.73	3.40	4.17	4.29	4.00	3.84	3.46	4.32	4.47
Barley, feed, Duluth (\$/bu.) 2/	1.53	1.44	1.78	2.31	2.41	2.28	2.20	2.27	2.27	2.33
Barley, malting, Minneapolis (\$/bu.)	2.24	1.89	2.04	4.11	3.84	3.20	3.02	2.83	2.97	3.17
<b>Exports 3/</b>										
Corn (mil. bu.)	1,241	1,504	1,723	2,036	210	239	155	192	194	214
Feed grains (mil. metric tons) 4/	36.8	46.3	52.3	61.3	8.1	7.0	4.8	5.8	5.7	8.2
<b>Marketing year 1/</b>										
				1989				1990		
				1985/86	1986/87	1987/88	1988/89	Dec-Feb	Mar-May	June-Aug
<b>Corn</b>								Sept-Nov		
Stocks, beginning (mil. bu.)	1,648	4,040	4,882	4,259	7,072	5,204	3,419	1,930	7,079	4,213
Domestic use Feed (mil. bu.)	4,095	4,714	4,805	3,979	1,082	849	690	1,499	1,270	940
Food, seed, ind. (mil. bu.)	1,160	1,182	1,229	1,245	284	337	330	298	295	348
Exports (mil. bu.)	1,241	1,504	1,723	2,036	508	600	470	582	682	628
Total use (mil. bu.)	6,496	7,410	7,757	7,260	1,869	1,787	1,490	2,379	2,223	1,917

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. P = preliminary. — not available.

Information contact: James Cole (202) 788-1840.

**Table 21.—Fats & Oils**

	Marketing year *				1989		1990			
	1985/86	1986/87	1987/88	1988/89	Apr	Dec	Jan	Feb	Mar	Apr
<b>Soybeans</b>										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.20	5.03	8.87	7.41	7.23	5.74	5.80	5.86	5.85	5.98
Crushings (mil. bu.)	1,052.8	1,178.8	1,174.5	1,057.7	89.8	105.4	107.2	91.8	102.8	95.1
Exports (mil. bu.)	740.7	756.9	801.8	530.8	41.4	65.8	77.4	75.0	88.0	43.7
Stocks, beginning (mil. bu.)	316.0	536.4	436.4	302.5	99.2	108.5	89.7	93.8	91.4	83.4
<b>Soybean oil</b>										
Wholesale price, crude, Decatur (cts./lb.)	18.02	15.36	22.87	21.09	.22.0	18.1	19.3	19.3	21.8	24.2
Production (mil. lb.)	11,817.3	12,783.1	12,974.5	11,737.0	1,004.0	1,181.2	1,187.4	1,021.7	1,477.3	1,518.7
Domestic disap. (mil. lb.)	10,045.9	10,820.2	10,734.1	10,455.8	1,032.9	975.2	1,036.9	800.1	1,320.9	1,461.7
Exports (mil. lb.)	1,257.3	1,184.5	1,673.2	1,658.2	105.5	113.4	95.4	136.2	184.4	33.0
Stocks, beginning (mil. lb.)	632.5	946.6	1,725.0	2,092.2	2,893.4	1,532.4	1,604.9	1,717.5	1,702.9	1,694.9
<b>Soybean meal</b>										
Wholesale price, 44% protein, Decatur (\$/ton)	154.88	162.81	221.90	233.46	220.75	179.4	172.30	181.80	185.10	185.40
Production (1,000 ton)	24,951.3	27,758.8	28,060.2	24,942.7	2,128.6	2,519.8	2,548.6	2,170.9	2,432.3	2,264.0
Domestic disap. (1,000 ton)	19,117.2	20,387.4	21,275.9	19,792.5	1,456.7	1,820.6	2,052.4	1,802.8	1,815.8	1,835.0
Exports (1,000 ton)	6,009.3	7,343.0	8,871.0	5,130.8	610.9	585.1	570.4	560.1	566.8	433.0
Stocks, beginning (1,000 ton)	386.9	211.7	240.2	153.5	237.9	184.3	328.2	254.0	262.0	311.8
Margarine, wholesale price, Chicago, white (cts./lb.)	51.2	40.3	40.3	52.3	55.8	52.4	52.6	53.6	54.2	54.3

\* Beginning September 1 for soybeans; October 1 for soymeal & oil; calendar year for margarine.

Information contacts: Roger Hoekin (202) 788-1840, Tom Bickerton (202) 788-1824.

Table 22.—Farm Programs, Price Supports, Participation &amp; Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates				Base acres 1/	Program 2/	Participation rate 3/
				Deficiency		Paid land diversion	PIK			
				\$/bu.	Percent 4/	MIL. acres				
<b>Wheat</b>										
1984/85	4.38	3.30	—	1.00	2.70	85	94.0	20/10/10-20	80/80/20	
1985/86	4.38	3.30	—	1.08	2.70	—	94.0	20/10/0	73	
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	91.6	22.5/2.5/5-10	85/85/21	
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.5/0/0	88	
1988/89	4.23	2.76	2.21	0.69	—	—	84.8	27.5/0/0	86	
1989/90	4.10	2.58	2.06	7/ 0.32	—	—	82.3	10/0/0	78	
1990/91	4.00	2.44	1.95	0.90	—	—	86.6	* 5/0/0	80	
<b>Rice</b>										
1984/85	11.90	8.00	8.00	3.76	—	—	4.1	25/0/0	85	
1985/86	11.90	8.00	6/ 3.16	3.90	3.50	—	4.2	20/15/0	90	
1986/87 6/	11.90	7.20	6/ 3.82	4.70	—	—	4.2	35/0/0	94	
1987/88	11.66	6.84	6/ 5.77	4.82	—	—	4.1	35/0/0	96	
1988/89	11.15	6.63	6/ 6.30	4.31	—	—	4.1	25/0/0	94	
1989/90	10.80	6.50	6/ 6.50	3.56	—	—	4.1	25/0/0	95	
1990/91	10.71	6.50	—	3.71	—	—	4.2	20/0/0	92	
<b>Corn</b>										
1984/85	3.03	2.55	—	0.43	—	—	80.8	10/0/0	54	
1985/86	3.03	2.55	—	0.48	—	—	84.2	10/0/0	69	
1986/87 5/	3.03	2.40	1.92	1.11	—	—	81.7	17.5/2.5/0	86	
1987/88	3.03	2.28	1.82	1.09	2.00	—	81.5	20/15/0	90	
1988/89	2.93	2.21	1.77	7/ 0.33	1.75	—	82.9	20/10/0; 0/92	87	
1989/90	2.84	2.06	1.65	7/ 0.89	—	—	82.7	10/0/0; 0/92	81	
1990/91	2.75	1.96	1.57	0.90	—	—	82.6	10/0/0; 0/92	76	
<b>Sorghum</b>										
1984/85	2.88	2.42	—	0.48	—	—	18.4	8/ (same)	42	
1985/86	2.88	2.42	—	0.48	—	—	19.3	—	55	
1986/87 6/	2.88	2.28	1.82	1.06	0.65	—	19.0	—	75	
1987/88	2.88	2.17	1.74	0.82	1.80	—	17.4	—	84	
1988/89	2.78	2.10	1.68	1.08	1.66	—	16.8	—	82	
1989/90	2.70	1.96	1.57	7/ 0.90	—	—	16.2	—	79	
1990/91	2.61	1.86	1.49	0.91	—	—	15.4	—	75	
<b>Barley</b>										
1984/85	2.60	2.08	—	0.26	—	—	11.6	8/ (same)	44	
1985/86	2.60	2.08	—	0.52	—	—	13.3	—	57	
1986/87 5/	2.60	1.95	1.56	0.99	0.57	—	12.4	—	72	
1987/88	2.60	1.86	1.49	0.52	1.80	—	12.5	—	84	
1988/89	2.51	1.80	1.44	1.04	1.40	—	12.5	—	79	
1989/90	2.43	1.68	1.34	7/ 0.23	—	—	12.4	—	69	
1990/91	2.36	1.60	1.28	0.26	—	—	11.9	—	66	
<b>Oats</b>										
1984/85	1.60	1.31	—	0.00	—	—	9.8	8/ (same)	14	
1985/86	1.60	1.31	—	0.29	—	—	9.4	—	14	
1986/87 5/	1.60	1.23	0.99	0.39	0.38	—	9.2	—	37	
1987/88	1.60	1.17	0.94	0.20	0.80	—	8.4	—	45	
1988/89	1.55	1.13	0.90	0.30	—	—	7.9	5/0/0; 0/92	30	
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0; 0/92	23	
1990/91	1.45	1.01	0.81	0.00	—	—	7.5	5/0/0; 0/92	10	
<b>Soybeans 9/</b>										
1984/85	—	5.02	—	—	—	—	—	—	—	—
1985/86	—	5.02	—	—	—	—	—	—	—	—
1986/87 5/	—	4.77	—	—	—	—	—	—	—	—
1987/88	—	4.77	—	—	—	—	—	—	—	—
1988/89	—	4.77	—	—	—	—	—	—	—	—
1989/90	—	4.53	—	—	—	—	—	—	10/ 10/25	—
<b>Upland cotton</b>										
1984/85	81.0	55.00	—	18.60	—	—	15.6	25/0/0	70	
1985/86	81.0	57.30	—	23.70	30.00	—	15.9	20/10/0	82/0/0	
1986/87 6/	81.0	65.00	11/ 44.00	26.00	—	—	15.5	25/0/0	93	
1987/88	79.4	52.25	12/ —	17.3	—	—	14.5	25/0/0	93	
1988/89	75.9	51.80	12/ —	19.4	—	—	14.5	12.5/0/0	89	
1989/90	73.4	50.00	12/ —	13.1	—	—	14.6	25/0/0	89	
1990/91	72.9	50.27	12/ —	11.0	—	—	14.4	12.5/0/0	87	

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1984 PIK rates apply only to the 10-20 portion. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gremm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn in each year except 1988-90, when the oats ARP was lower than for the other seed grains. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Soybean program data refers to percent of program crop base permitted to shift into beans without loss of base. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices. \* On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base to boost 1990 supplies. For every acre planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. — = not available.

Information contact: James Cole (202) 786-1840.

Table 23.—Fruit

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P
Citrus 1/									
Production (1,000 ton)	15,105	12,139	13,682	10,832	10,525	11,058	11,993	12,781	13,183
Per capita consumpt. (lbs.) 2/	104.4	109.3	120.0	102.8	109.1	117.3	112.8	113.6	—
Noncitrus 3/									
Production (1,000 tons)	13,332	14,659	14,168	14,301	14,191	13,874	16,011	15,884	16,300
Per capita consumpt. (lbs.) 2/	88.0	89.2	88.7	93.9	91.8	96.4	101.5	97.7	—
	1989				1990				
F.o.b. shipping point prices:	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Apples (\$/carton) 4/	10.48	8.31	—	9.00	8.83	11.00	11.00	11.00	11.00
Pears (\$/box) 5/	—	11.10	—	11.75	12.00	13.85	14.00	14.00	14.00
Grower prices									
Oranges (\$/box) 6/	5.62	6.22	6.47	5.83	4.70	4.93	5.33	6.80	7.03
Grapefruit (\$/box) 6/	6.10	8.18	5.54	5.18	4.82	4.68	8.23	8.19	8.06
Stocks, ending									
Fresh apples (mil. lbs.)	2,522.0	4,501.9	3,845.8	3,220.8	2,571.7	2,024.6	1,399.6	1,004.3	590.2
Fresh pears (mil. lbs.)	446.2	436.9	368.8	272.8	200.2	153.0	104.8	83.0	28.9
Frozen fruits (mil. lbs.)	863.9	955.1	909.3	805.2	727.9	681.7	809.0	591.0	661.6
Frozen orange juice (mil. lbs.)	808.4	693.1	667.7	749.6	928.6	1,041.5	1,119.2	1,170.0	1,144.5

1/ 1989 indicated 1988/89 season. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary. — = not available.

Information contact: Wynnice Napper (202) 788-1885.

Table 24.—Vegetables

	Calendar year									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Production										
Total vegetables (1,000 cwt)	395,225	392,343	430,795	403,320	457,394	453,771	481,329	485,240	458,149	620,377
Fresh (1,000 cwt) 1/ 3/	179,416	163,456	193,452	185,561	202,808	204,146	215,969	220,537	230,483	240,360
Processed (tons) 2/ 3/	10,790,440	10,444,330	11,867,170	10,887,950	12,739,280	12,481,240	12,268,020	12,235,130	11,383,320	14,450,860
Mushrooms (1,000 lbs.)	469,578	817,146	490,826	561,531	595,681	687,956	614,393	631,819	667,367	—
Potatoes (1,000 cwt)	303,905	340,623	355,131	333,726	362,039	406,809	361,743	389,320	358,438	370,344
Sweetpotatoes (1,000 cwt)	10,953	12,789	14,833	12,083	12,902	14,573	12,368	11,611	10,945	11,499
Dry edible beans (1,000 cwt)	26,729	32,751	25,563	18,520	21,070	22,175	22,886	26,031	19,263	24,333
	1989					1990				
Shipments	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Fresh (1,000 cwt) 4/	21,914	16,030	18,605	21,068	17,467	21,552	17,748	19,880	22,475	35,292
Potatoes (1,000 cwt)	10,678	9,005	9,612	12,639	10,389	13,090	10,758	12,095	12,809	16,062
Sweetpotatoes (1,000 cwt)	187	288	333	789	451	301	255	251	331	268

1/ Include fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. — = not available.

Information contact: Gary Lucier or Cathy Greene (202) 788-1884.

Table 25.—Other Commodities

	Annual					1989				1990	
	1985	1986	1987	1988	1989	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	
Sugar											
Production 1/	5,969	6,257	7,309	7,087	6,827	1,822	677	617	3,709	1,871	
Deliveries 1/	8,035	7,786	8,187	8,188	8,309	1,902	2,056	2,161	2,190	1,988	
Stocks, ending 1/	3,128	3,226	3,195	3,132	2,933	3,402	2,351	1,224	2,933	3,112	
Coffee											
Composite green price N.Y. (cts./lb.)	137.46	185.18	109.14	115.59	95.17	126.67	118.01	72.29	83.70	73.22	
Imports, green bean equiv. (mil. lbs.) 2/	2,550	2,598	2,638	2,072	2,630	686	535	784	725	865	
	Annual					1989				1990	
Tobacco	1987	1988	1989	Feb	Sept	Oct	Nov	Dec	Jan	Feb	
Prices at auctions 3/											
Flue-cured (\$/lb.)	1.59	1.61	—	—	1.74	1.70	1.58	—	—	—	
Burley (\$/lb.)	1.56	1.61	—	1.55	—	—	1.67	1.68	1.68	1.67	
Domestic consumption 4/											
Cigarettes (bill.)	575.0	582.5	540.1	41.9	44.4	48.2	50.0	34.4	38.4	—	
Large cigars (mil.)	2,728	2,531	2,467.6	171.5	218.2	211.4	212.5	187.0	165.5	—	

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. — = not available.

Information contact: sugar, Peter Buzzanell (202) 788-1888, coffee, Fred Gray (202) 788-1888, tobacco, Verner Grise (202) 788-1890.

## World Agriculture

**Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products**

	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 P	1990/91 F
Million units							
<b>Wheat</b>							
Area (hectares)	231.2	229.6	228.2	219.9	218.0	228.0	231.4
Production (metric tons)	511.9	500.1	530.7	501.5	500.8	535.3	571.7
Exports (metric tons) 1/	107.0	85.0	90.7	105.0	96.0	97.0	102.3
Consumption (metric tons) 2/	493.0	496.2	522.5	530.5	531.3	538.4	558.2
Ending stocks (metric tons) 3/	164.0	168.3	176.4	147.5	117.0	115.8	120.3
<b>Coarse grains</b>							
Area (hectares)	334.8	341.3	338.5	323.8	325.0	322.8	—
Production (metric tons)	815.8	842.7	831.7	793.3	730.4	800.8	812.0
Exports (metric tons) 1/	100.4	83.2	83.7	94.5	101.8	93.4	—
Consumption (metric tons) 2/	782.6	778.4	805.9	814.3	797.9	828.8	822.8
Ending stocks (metric tons) 3/	143.9	208.2	234.0	213.0	145.5	117.3	106.7
<b>Rice, milled</b>							
Area (hectares)	144.1	144.6	145.1	141.4	145.3	146.2	—
Production (metric tons)	318.8	318.6	318.7	313.7	330.2	340.8	340.8
Exports (metric tons) 4/	11.4	12.0	12.9	11.9	15.2	12.7	13.0
Consumption (metric tons) 2/	310.8	319.5	322.8	319.7	328.1	334.1	340.8
Ending stocks (metric tons) 3/	54.9	54.9	50.8	44.9	46.0	53.8	53.0
<b>Total grains</b>							
Area (hectares)	709.9	715.5	709.8	685.1	688.3	694.8	—
Production (metric tons)	1,646.5	1,661.6	1,681.1	1,608.5	1,561.4	1,676.7	1,724.6
Exports (metric tons) 1/	218.8	180.8	187.3	200.1	206.6	211.5	208.7
Consumption (metric tons) 2/	1,588.2	1,594.1	1,651.2	1,664.5	1,657.3	1,699.3	1,721.4
Ending stocks (metric tons) 3/	362.8	431.4	461.2	405.4	309.4	288.7	289.9
<b>Oilsseeds</b>							
Crush (metric tons)	150.7	155.1	181.4	187.7	185.8	171.8	178.8
Production (metric tons)	191.1	196.2	194.4	209.5	203.0	211.4	220.9
Exports (metric tons)	33.1	34.5	37.7	39.5	31.0	34.5	34.8
Ending stocks (metric tons)	21.1	28.8	23.5	24.0	22.1	22.1	22.3
<b>Meals</b>							
Production (metric tons)	101.8	105.0	110.5	115.1	111.8	118.4	120.7
Exports (metric tons)	32.3	34.4	38.7	36.3	38.2	38.7	40.1
<b>Oils</b>							
Production (metric tons)	46.2	49.4	50.3	53.1	53.7	56.7	58.9
Exports (metric tons)	15.6	16.4	16.0	17.7	18.4	19.3	19.5
<b>Cotton</b>							
Area (hectares)	33.9	31.9	29.9	31.1	34.1	32.6	—
Production (bales)	88.2	79.8	70.4	81.2	84.8	79.5	88.6
Exports (bales)	20.2	20.2	26.0	23.1	28.0	24.2	24.7
Consumption (bales)	70.0	75.8	82.5	84.1	85.6	86.1	87.1
Ending stocks (bales)	42.4	47.2	35.2	31.9	30.5	24.1	23.2
	1984	1985	1986	1987	1988	1989 P	1990 F
<b>Red meat</b>							
Production (metric tons)	99.8	103.7	106.7	109.7	113.3	114.6	113.9
Consumption (metric tons)	97.8	101.6	105.4	107.9	111.5	113.0	112.1
Exports (metric tons) 1/	8.0	8.4	8.7	8.7	8.9	8.9	7.2
<b>Poultry</b>							
Production (metric tons)	25.2	26.2	27.4	29.3	30.2	31.3	32.7
Consumption (metric tons)	25.0	25.8	27.0	28.7	29.8	30.9	32.1
Exports (metric tons) 1/	1.3	1.2	1.3	1.5	1.7	1.7	1.8
<b>Dairy</b>							
Milk production (metric tons)	413.0	413.4	419.0	427.1	429.8	431.3	437.2

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1985 data correspond with 1984/85, etc. P = preliminary, F = forecast. — = not available.

Information contacts: Crops, Frederic Suris (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1288; dairy, Sara Short (202) 786-1780.

## U.S. Agricultural Trade

**Table 27.—Prices of Principal U.S. Agricultural Trade Products**

	Annual			1989		1990				
	1987	1988	1989	May	Dec	Jan	Feb	Mar	Apr	May
<b>Export commodities</b>										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.11	3.97	4.85	4.82	4.82	4.59	4.41	4.28	4.40	4.10
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	1.95	2.73	2.85	3.02	2.79	2.70	2.71	2.80	3.02	3.08
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	1.88	2.62	2.70	2.84	2.65	2.60	2.59	2.64	2.79	2.84
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.55	7.81	7.06	7.61	6.22	6.07	6.05	6.18	6.24	6.40
Soybean oil, Decatur (cts./lb.)	15.85	23.52	20.21	22.23	19.10	19.55	20.54	22.92	23.20	24.49
Soybean meal, Decatur (\$/ton)	175.67	234.75	216.59	215.09	179.82	171.68	161.80	164.34	168.85	176.98
Cotton, 8-market avg, spot (cts./lb.)	64.35	57.25	63.78	63.70	63.56	62.21	65.03	68.06	71.31	74.61
Tobacco, avg. price at auction (cts./lb.)	144.37	147.82	161.66	160.20	165.37	160.77	160.54	160.54	164.68	164.68
Rice, f.o.b. mill, Houston (\$/cwt.)	13.15	19.60	15.68	15.00	15.67	15.50	15.69	16.25	16.25	16.25
Inedible tallow, Chicago (cts./lb.)	13.79	16.64	14.71	14.70	14.25	14.87	14.50	14.47	13.77	13.68
<b>Import commodities</b>										
Coffee, N.Y. spot (\$/lb.)	1.09	1.21	1.04	1.36	0.70	0.72	0.76	0.85	0.84	0.84
Rubber, N.Y. spot (cts./lb.)	50.65	59.20	50.65	52.07	44.82	44.72	45.75	45.91	45.64	45.80
Cocoa beans, N.Y. (\$/lb.)	0.87	0.89	0.55	0.54	0.42	0.44	0.45	0.50	0.50	0.63

Information contact: Mary Teymourian (202) 786-1824.

**Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>**

	1989				1990					1990
	Sept	Oct	Nov P	Dec P	Jan P	Feb P	Mar P	Apr P	May P	June P
	1985 = 100									
Total U.S. trade 2/	73.9	71.7	71.0	69.4	67.8	67.3	68.7	68.1	67.0	66.4
Agricultural trade										
U.S. markets	81.4	79.8	79.8	78.7	78.3	78.1	79.3	79.7	79.9	78.8
U.S. competitors 3/	85.2	83.7	82.4	84.0	80.1	80.3	79.7	79.8	79.8	79.6
Wheat										
U.S. markets	92.0	90.8	91.4	89.5	88.8	88.5	88.7	89.5	89.5	89.6
U.S. competitors 3/	83.6	81.8	80.4	84.6	79.8	80.8	80.6	79.8	79.8	79.6
Soybeans										
U.S. markets	73.8	72.0	71.8	70.3	69.7	69.4	71.0	70.9	69.7	69.4
U.S. competitors 3/	92.4	89.5	85.3	106.5	82.7	82.6	79.3	81.3	81.5	81.8
Corn										
U.S. markets	74.8	73.3	73.7	73.0	73.1	73.0	74.8	75.4	74.1	74.2
U.S. competitors 3/	92.4	89.0	86.4	101.2	85.1	85.0	85.8	85.3	85.0	84.6
Cotton										
U.S. markets	77.1	76.1	76.4	76.0	76.4	76.5	78.1	78.5	77.5	77.7
U.S. competitors	84.0	81.3	79.7	79.3	78.2	77.9	77.3	78.7	78.4	75.9

<sup>1</sup>/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. 2/ Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. 3/ Substantial devaluations of the Argentine austral & Brazilian cruzado resulted in a sharp increase in the December, 1988, & subsequent values of these indices. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1706.

**Table 29.—Trade Balance**

	Fiscal year 1/								Apr 1990
	1983	1984	1985	1986	1987	1988	1989	1990 F	
	\$ million								
Exports									
Agricultural	34,700	38,027	31,201	26,312	27,876	35,370	39,651	40,000	3,348
Nonagricultural	159,373	170,014	179,236	179,291	202,911	258,593	302,507	—	27,884
Total 2/	194,142	208,041	210,437	205,603	230,787	293,972	342,158	—	31,232
Imports									
Agricultural	16,373	18,916	19,740	20,884	20,850	21,014	21,479	22,000	1,894
Nonagricultural	230,527	297,736	313,722	342,846	367,374	409,138	441,072	—	36,548
Total 3/	246,900	316,652	333,462	363,730	388,024	430,152	462,551	—	38,442
Trade balance									
Agricultural	18,396	18,111	11,461	5,428	7,226	14,365	18,172	18,000	1,454
Nonagricultural	-71,154	-127,722	-134,486	-163,555	-164,463	-150,545	-138,565	—	-8,664
Total	-52,758	-108,611	-123,025	-158,127	-157,237	-136,180	-120,393	—	-7,210

<sup>1</sup>/ Fiscal years begin October 1 & end September 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 2/ Domestic exports including Department of Defense shipments (F.A.S. value). 3/ Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*			Apr 1990	Fiscal year*			Apr 1990	
	1988	1989	1990 F		1988	1989	1990 F		
	1,000 units				\$ million				
<b>EXPORTS</b>									
Animals, live (no.) 1/	430	758	—	55	452	476	—	18	
Meats & preps., excl. poultry (mt)	631	869	0	62	1,797	2,355	—	195	
Dairy products (mt)	388	584	—	5	536	475	400	35	
Poultry meats (mt)	390	466	600	48	424	514	—	55	
Fats, oils, & greases (mt)	1,362	1,377	3/1,300	63	545	531	—	31	
Hides & skins incl. furskins	—	—	—	—	1,637	1,713	—	163	
Cattle hides, whole (no.) 1/	20,617	26,260	—	1,932	1,458	1,380	—	105	
Mink pelts (no.) 1/	2,455	3,073	—	1,453	88	91	—	29	
Grains & feeds (mt)	108,944	114,976	—	9,574	12,569	16,837	4/16,300	1,369	
Wheat (mt)	40,517	37,702	32,000	2,303	4,459	6,006	5/5,100	355	
Wheat flour (mt)	1,238	1,268	1,200	121	170	266	—	29	
Rice (mt)	2,173	3,052	2,400	234	731	955	800	61	
Feed grains, incl. products (mt)	63,117	61,094	67,200	5,890	5,193	7,370	7,900	697	
Feeds & fodders (mt)	11,255	11,071	8/11,500	966	1,720	1,848	—	165	
Other grain products (mt)	910	1,197	—	150	362	513	—	59	
Fruits, nuts, and preps. (mt)	2,409	2,555	—	223	2,368	2,394	—	203	
Fruit juices incl.									
froz. (1,000 hectoliters) 1/	5,497	4,897	—	548	252	264	—	30	
Vegetables & preps. (mt)	1,821	2,482	—	214	1,280	1,546	—	193	
Tobacco, unmanufactured (mt)	229	212	200	18	1,297	1,274	1,300	120	
Cotton, excl. linters (mt)	1,388	1,441	1,800	160	2,136	2,039	2,800	252	
Seeds (mt)	288	514	—	25	415	500	800	36	
Sugar, cane or beet (mt)	318	368	—	19	98	134	—	8	
Oilseeds & products (mt)	29,688	21,090	—	1,719	7,758	8,624	5,900	440	
Oilseeds (mt)	21,601	14,775	—	1,221	5,295	4,400	—	300	
Soybeans (mt)	21,142	14,088	18,800	1,188	5,066	4,079	3,700	277	
Protein meal (mt)	6,389	4,818	4,100	414	1,501	1,317	900	84	
Vegetable oils (mt)	1,609	1,498	—	83	982	908	—	58	
Essential oils (mt)	0	13	—	1	120	171	—	19	
Other	810	812	—	7	1,495	1,805	—	181	
Total	148,473	147,500	150,000	12,157	35,379	39,651	40,000	3,348	
<b>IMPORTS</b>									
Animals, live (no.) 1/	2,238	2,484	—	306	729	740	800	104	
Meats & preps., excl. poultry (mt)	1,280	1,092	—	89	2,788	2,433	—	213	
Beef & veal (mt)	779	868	725	58	1,681	1,527	1,800	130	
Pork (mt)	458	371	345	29	1,001	778	800	75	
Dairy products (mt)	232	211	300	18	881	834	800	66	
Poultry & products 1/	—	—	—	—	97	130	—	9	
Fats, oils, & greases (mt)	20	14	—	2	19	14	—	2	
Hides & skins, incl. furskins 1/	—	—	—	—	247	240	—	10	
Wool, unmanufactured (mt)	56	82	—	5	292	319	—	19	
Grains & feeds (mt)	3,075	3,468	3,500	317	888	1,139	1,100	99	
Fruits, nuts, & preps., excl. juices (mt)	4,797	5,036	5,100	568	2,169	2,269	—	258	
Bananas & plantains (mt)	3,030	3,039	3,050	286	820	851	900	83	
Fruit juices (1,000 hectoliters) 1/	26,758	27,778	30,000	2,048	768	793	—	66	
Vegetables & preps. (mt)	2,518	2,953	3,100	202	1,593	1,959	2,300	176	
Tobacco, unmanufactured (mt)	217	169	180	15	611	521	500	44	
Cotton, unmanufactured (mt)	36	13	—	2	9	8	—	2	
Seeds (mt)	143	158	170	33	153	187	200	23	
Nursery stock & cut flowers 1/	—	—	—	—	419	466	—	46	
Sugar, cane or beet (mt)	1,078	1,830	—	168	372	620	—	73	
Oilseeds & products (mt)	1,772	1,917	1,950	174	838	946	900	79	
Oilseeds (mt)	208	424	—	44	71	159	—	17	
Protein meal (mt)	253	359	—	20	42	65	—	3	
Vegetable oils (mt)	1,311	1,133	—	110	725	721	—	59	
Beverages excl. fruit juices (1,000 hectoliters) 1/	15,583	13,967	—	1,092	2,008	1,815	—	141	
Coffee, tea, cocoa, spices	1,841	1,868	—	207	4,274	3,896	—	307	
Coffee, incl. products (mt)	1,050	1,084	1,250	110	2,600	2,467	2,300	170	
Cocoa beans & products (mt)	562	564	565	78	1,164	969	900	99	
Rubber & stiled gums (mt)	848	927	850	63	949	1,051	800	53	
Other	—	—	—	—	931	1,097	—	108	
Total	—	—	—	—	21,014	21,479	22,000	1,894	

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/–6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m.tone. 3/ 1,347 million dollars. 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11,095 million m.tone. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			Apr 1990	Change from year* earlier			Apr 1990
	1988	1989	1990 F		1988	1989	1990 F	
	\$ million				Percent			
WESTERN EUROPE								
European Community (EC-12)	8,053	7,067	8,900	597	12	-12	-3	20
Belgium-Luxembourg	7,538	6,558	8,400	584	11	-13	-3	22
France	429	431	—	26	1	1	—	-6
Germany, Fed. Rep.	563	474	—	34	14	-18	—	7
Italy	1,315	918	—	80	4	-30	—	-9
Netherlands	713	803	—	75	-3	-18	—	89
United Kingdom	2,103	1,847	—	134	8	-12	—	-9
Portugal	818	738	—	64	23	-10	—	82
Spain, incl. Canary Islands	340	307	—	28	25	-10	—	-4
Other Western Europe	848	878	—	102	29	3	—	133
Switzerland	518	510	500	33	20	-1	0	0
EASTERN EUROPE	191	166	—	14	32	-13	—	-12
German Dem. Rep.	559	422	800	52	23	-24	50	-16
Poland	87	72	—	17	0	8	—	38
Yugoslavia	167	45	—	8	185	-73	—	32
Romania	104	78	—	3	-21	-28	—	44
USSR	93	62	—	21	-19	-33	—	159
USSR	1,940	3,299	3,200	385	194	70	-3	-19
ASIA	15,944	18,885	18,500	1,428	33	17	-11	-11
West Asia (Mideast)	1,904	2,270	2,300	168	14	19	0	4
Turkey	120	238	—	21	3	97	—	155
Iraq	735	791	700	58	39	8	-13	-11
Israel	334	265	—	35	37	-21	—	36
Saudi Arabia	464	482	500	29	-5	4	0	2
South Asia	805	1,171	—	32	133	45	—	-69
Bangladesh	107	213	—	6	-3	98	—	-85
India	354	243	—	10	281	-31	—	32
Pakistan	278	809	500	1	181	121	-17	-99
China	813	1,494	900	50	161	144	-40	-50
Japan	7,274	8,152	8,300	699	31	12	1	-5
Southeast Asia	1,022	974	—	98	44	-5	—	40
Indonesia	245	218	—	27	61	-12	—	85
Philippines	345	344	400	24	33	0	33	-1
Other East Asia	4,326	4,823	4,900	382	24	7	8	-12
Taiwan	1,577	1,594	1,600	134	16	1	-6	-5
Korea, Rep.	2,259	2,453	2,700	195	33	9	8	-20
Hong Kong	488	575	600	53	12	18	0	5
AFRICA	2,272	2,281	2,400	183	27	0	4	23
North Africa	1,659	1,798	2,000	149	30	8	11	18
Morocco	193	218	—	14	-2	12	—	746
Algeria	537	549	700	53	120	2	40	1
Egypt	788	955	800	56	3	21	-20	-13
Sub-Saharan	613	483	400	34	21	-21	+20	49
Nigeria	44	30	—	4	-35	-31	—	370
Rep. S. Africa	85	57	—	7	74	-34	—	322
LATIN AMERICA & CARIBBEAN	4,401	5,442	5,000	344	17	24	-7	-23
Brazil	176	152	100	3	-58	-13	-33	-37
Caribbean Islands	667	1,007	—	81	5	18	—	-11
Central America	414	448	—	30	10	8	—	-25
Colombia	178	139	—	18	55	-22	—	14
Mexico	1,726	2,757	2,500	173	42	60	11	-28
Peru	174	81	—	4	24	-54	—	166
Venezuela	597	587	200	25	30	-2	-66	-42
CANADA	1,973	2,187	3,100	381	11	11	40	89
OCEANIA	237	268	300	17	3	13	0	-22
Total	35,379	39,651	40,000	3,348	27	12	1	-2
Developed countries	17,905	18,000	18,800	1,713	19	1	4	17
Less developed countries	14,362	18,438	18,500	1,168	25	14	1	-13
Centrally planned countries	3,111	5,215	4,700	487	131	68	-10	-24

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. F = forecast. — = not available.

Note: Adjusted for transhipments through Canada.

Information contact: Stephen MacDonald (202) 788-1822

## Farm Income

**Table 32.—Farm Income Statistics**

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
1. Farm receipts	142.0	144.1	147.1	141.1	148.8	149.1	140.6	145.3	157.2	184	167 to 175
Crops (incl. net CCC loans)	71.7	72.5	72.3	67.1	69.5	74.3	64.0	63.8	72.6	74	77 to 81
Livestock	68.0	69.2	70.3	69.4	73.0	69.8	71.5	75.7	78.0	84	84 to 87
Farm related 1/	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.8	5.7	8	5 to 7
2. Direct Government payments	1.3	1.8	3.6	9.3	8.4	7.7	11.8	18.7	14.5	11	8 to 10
Cash payments	1.3	1.8	3.5	4.1	4.0	7.6	8.1	8.6	7.1	9	8 to 9
Value of PIK commodities	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	2	0 to 1
3. Total gross farm income (4+5+6) 2/	149.3	166.4	163.5	153.1	174.9	186.4	160.4	171.6	177.6	191	191 to 197
4. Gross cash income (1+2)	143.3	148.0	150.6	150.4	155.2	158.9	152.5	162.0	171.6	175	176 to 183
5. Nonmoney income 3/	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10.3	10	9 to 11
6. Value of inventory change	-6.3	6.6	-1.4	-10.9	6.3	-2.4	-2.7	-0.4	-4.3	6	2 to 8
7. Cash expenses 4/	109.1	113.2	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	121 to 124
8. Total expenses	133.1	139.4	140.0	140.4	142.7	134.0	122.4	128.0	135.0	142	142 to 147
9. Net cash income (4-7)	34.2	32.8	37.8	36.9	38.6	46.7	61.8	54.5	57.2	54	55 to 59
10. Net farm income (3-8)	16.1	26.9	23.5	12.7	32.2	32.4	38.0	43.6	42.7	49	47 to 51
Deflated (1982\$)	18.8	28.6	23.5	12.2	29.0	29.2	33.4	37.2	35.2	38	36 to 40
11. Off-farm income	34.7	35.8	36.4	37.0	38.9	42.6	44.6	46.8	51.7	54	56 to 58
12. Loan changes 5/: Real estate	9.9	9.1	3.8	2.3	-1.1	-6.0	-9.0	-7.5	-4.4	-2	-2 to 0
13.       5/: Non-real estate	5.3	6.5	3.4	0.9	-0.8	-9.6	-11.0	-4.6	-0.3	0	0 to 2
14. Rental income plus monetary change	6.1	6.4	6.3	5.3	6.9	8.8	7.8	6.8	8.5	8	7 to 9
15. Capital expenditures 6/	18.0	16.8	13.3	12.7	12.5	9.2	8.6	9.8	10.2	12	10 to 14
16. Net cash flow (9+12+13+14-15)	37.6	37.8	38.1	32.7	33.1	30.7	31.2	39.4	50.8	48	49 to 57

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, purchases of hired labor, & farm household expenses. 1987 & 1988 expenses include preliminary revisions from the 1987 Census of Agriculture. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

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**Table 33.—Balance Sheet of the U.S. Farming Sector**

	Calendar year 1/ 2/										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
<b>Assets</b>											
Real estate	782.4	784.7	748.8	758.2	671.3	599.3	558.7	584.8	615.1	636	650 to 660
Non-real estate	207.2	202.8	202.8	196.9	263.1	191.4	188.2	198.8	13.0	217	210 to 220
Livestock & poultry	60.6	53.5	53.0	49.5	49.5	46.3	47.8	58.0	65.5	70	68 to 72
Machinery & motor vehicles	.87.1	92.2	92.6	92.2	91.1	88.5	88.3	84.5	85.4	87	88 to 89
Crops stored 3/	33.0	29.1	27.7	23.9	29.7	23.6	19.1	20.9	26.2	24	21 to 25
Financial assets	28.5	28.0	29.5	31.3	32.8	33.0	35.2	35.2	35.9	36	36 to 38
Total farm assets	989.6	987.5	951.6	955.1	874.3	790.6	747.1	783.4	828.1	853	870 to 880
<b>Liabilities</b>											
Real estate debt 4/	89.6	98.7	102.5	104.8	103.6	97.6	88.6	81.1	76.7	74	71 to 75
Non-real estate debt 5/	77.1	83.0	87.0	87.9	87.1	77.5	66.6	62.0	61.7	61	60 to 64
Total farm debt	166.8	182.3	189.5	192.7	190.7	175.1	155.1	143.1	138.4	136	132 to 138
Total farm equity	822.8	805.2	762.1	762.4	683.6	615.5	591.9	640.3	689.7	717	735 to 745
<b>Percent</b>											
<b>Selected ratios</b>											
Debt-to-assets	16.9	18.5	19.9	20.2	21.8	22.1	20.8	18.3	16.7	16	15 to 16
Debt-to-equity	20.3	22.6	24.9	25.3	27.9	28.5	28.2	22.3	20.1	19	18 to 19
Debt-to-net cash income	488	556	497	523	493	375	299	248	242	251	230 to 240

1/ As of Dec. 31. 2/ Estimates of farm assets and equity for 1987-1990 reflect revisions in real estate assets based on the 1987 Census of Agriculture. Revisions in real estate assets for 1983-1986 have not been completed. 3/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 4/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 5/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 788-1798.

Table 34.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1988	1989	Mar 1990	Apr 1990	1988	1989	Mar 1990	Apr 1990	1988	1989	Mar 1990	Apr 1990
	\$ million 2/											
<b>NORTH ATLANTIC</b>												
Maine	217	215	19	17	197	233	32	32	414	448	52	49
New Hampshire	59	63	6	6	77	79	7	7	136	142	12	13
Vermont	351	373	34	31	51	51	6	9	401	424	40	41
Massachusetts	105	112	10	10	305	317	16	20	410	429	26	30
Rhode Island	13	13	1	1	66	66	4	6	79	79	6	7
Connecticut	183	186	18	15	214	218	18	23	398	404	35	37
New York	1,803	1,878	172	160	865	911	61	68	2,668	2,789	233	229
New Jersey	193	200	17	17	452	483	30	41	645	663	47	57
Pennsylvania	2,332	2,802	228	221	964	986	87	85	3,296	3,588	315	306
<b>NORTH CENTRAL</b>												
Ohio	1,584	1,701	151	163	1,980	2,114	153	122	3,564	3,815	304	285
Indiana	1,716	1,818	176	167	2,320	2,502	158	174	4,036	4,319	335	341
Illinois	2,255	2,248	203	201	3,927	4,458	465	342	6,182	6,707	668	542
Michigan	1,205	1,316	116	117	1,535	1,627	116	106	2,739	2,944	231	223
Wisconsin	4,215	4,339	380	383	784	941	50	65	4,980	5,279	430	447
Minnesota	3,416	3,720	319	332	2,649	2,809	175	173	6,067	6,529	493	505
Iowa	4,988	5,197	461	443	3,787	3,911	311	299	8,775	9,107	772	742
Missouri	2,012	2,169	201	213	1,746	1,727	105	88	3,758	3,898	306	281
North Dakota	850	643	50	41	1,506	1,465	129	118	2,358	2,108	178	159
South Dakota	2,049	2,108	163	140	895	884	77	64	2,944	2,992	240	204
Nebraska	5,390	5,643	466	470	2,409	2,878	229	177	7,800	8,521	695	647
Kansas	4,126	4,247	415	371	2,195	2,079	128	78	6,321	6,326	541	449
<b>SOUTHERN</b>												
Delaware	444	503	41	34	152	160	7	9	595	663	48	43
Maryland	788	870	98	66	457	476	28	54	1,224	1,346	128	120
Virginia	1,300	1,373	107	136	614	686	35	26	1,914	2,059	142	162
West Virginia	218	250	20	22	68	64	3	3	286	314	23	25
North Carolina	2,188	2,505	221	217	1,850	2,048	60	64	4,038	4,551	281	281
South Carolina	490	551	50	49	616	675	27	24	1,106	1,225	78	73
Georgia	2,018	2,272	200	188	1,554	1,589	67	65	3,570	3,861	288	253
Florida	1,132	1,225	111	98	4,688	4,982	367	414	5,820	6,207	478	512
Kentucky	1,530	1,673	123	103	980	1,258	65	32	2,510	2,931	186	136
Tennessee	1,056	1,061	95	94	877	861	41	34	1,933	1,922	136	128
Alabama	1,695	1,933	187	174	728	696	39	38	2,422	2,629	225	212
Mississippi	1,172	1,292	116	103	1,133	967	58	41	2,305	2,259	174	143
Arkansas	2,280	2,661	229	215	1,553	1,359	86	51	3,832	4,020	315	266
Louisiana	582	614	51	51	1,295	1,011	44	39	1,876	1,825	95	90
Oklahoma	2,243	2,408	238	192	1,112	1,185	49	48	3,354	3,594	287	240
Texas	6,562	6,864	601	592	3,689	3,829	256	247	10,251	10,863	858	838
<b>WESTERN</b>												
Montana	816	699	70	60	617	710	63	56	1,433	1,610	132	116
Idaho	1,039	1,047	97	86	1,285	1,670	128	140	2,324	2,717	225	226
Wyoming	584	669	50	44	177	186	7	5	761	656	57	49
Colorado	2,666	2,649	232	194	1,034	1,250	85	92	3,700	3,899	317	286
New Mexico	909	974	81	76	375	450	18	18	1,283	1,424	99	94
Arizona	792	744	67	55	1,177	1,158	110	53	1,969	1,902	177	108
Utah	528	574	49	42	173	174	13	20	701	748	62	63
Nevada	159	141	12	12	79	94	10	10	238	235	22	22
Washington	1,140	1,202	121	102	2,196	2,438	149	168	3,336	3,640	269	269
Oregon	673	739	62	61	1,508	1,563	88	79	2,182	2,302	151	140
California	4,682	5,123	437	369	12,693	12,504	778	792	17,375	17,626	1,215	1,162
Alaska	10	10	1	1	21	21	1	1	31	31	2	2
Hawaii	89	92	8	8	490	495	41	39	579	587	49	47
<b>UNITED STATES</b>	78,820	83,709	7,380	6,963	72,098	75,276	5,078	4,740	150,918	158,985	12,458	11,702

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 788-1804.

Table 35.—Cash Receipts From Farming

	Annual						1989		1990			
	1984	1985	1986	1987	1988	1989	Apr	Dec	Jan	Feb	Mar	Apr
\$ million												
Farm marketings & CCC loans*	142,784	144,114	135,187	141,916	150,918	158,985	11,273	14,324	14,724	10,838	12,458	11,702
Livestock & products	72,895	89,822	71,539	76,010	78,820	83,709	6,488	7,080	7,520	8,614	7,380	6,963
Meat animals	40,750	38,550	39,081	44,478	45,685	46,593	3,536	3,785	4,233	3,748	4,172	3,926
Dairy products	17,931	18,055	17,724	17,727	17,841	19,383	1,631	1,921	1,823	1,585	1,716	1,665
Poultry & eggs	12,245	11,209	12,701	11,517	12,865	15,346	1,254	1,201	1,288	1,139	1,333	1,215
Other	1,968	2,008	2,034	2,288	2,429	2,386	185	153	176	142	160	167
Crops	69,889	74,283	63,656	65,906	72,098	75,276	4,787	7,264	7,204	4,224	5,078	4,740
Food grains	9,731	8,990	6,741	5,780	7,872	7,848	263	889	792	437	433	327
Feed crops	16,138	22,591	16,912	14,543	14,305	16,856	888	1,732	2,074	1,101	1,360	1,218
Cotton (lint & seed)	3,674	3,687	3,371	4,189	4,548	4,740	88	901	509	311	259	166
Tobacco	2,813	2,699	1,921	1,826	1,960	2,381	21	227	335	53	1	18
Oil-bearing crops	13,841	12,475	10,614	11,294	13,537	12,172	535	1,048	1,448	456	757	538
Vegetables & melons	9,152	8,572	8,849	10,152	10,272	11,586	1,303	483	730	702	659	942
Fruits & tree nuts	6,734	6,946	7,248	8,058	9,139	9,026	494	945	561	420	368	221
Other	8,008	8,333	9,002	10,064	10,865	11,068	1,199	1,241	756	742	1,030	1,310
Government payments	8,430	7,704	11,813	16,747	14,480	10,887	1,058	849	336	1,045	2,331	1,176
Total	151,214	151,818	147,010	158,863	165,398	169,872	12,331	14,973	15,062	11,883	14,789	12,878

\*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1988 F	1990 F
\$ million											
Feed	20,971	20,855	18,592	21,725	19,852	18,015	16,179	18,898	22,462	24,000	21,000 to 25,000
Livestock	10,670	8,990	9,684	8,814	9,498	8,958	9,744	11,845	12,812	13,000	12,000 to 15,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,138	4,000	3,000 to 5,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,807	33,752	38,412	41,000	38,000 to 42,000
Fertilizer	9,491	9,409	8,018	7,067	7,429	7,258	5,787	6,210	7,000	8,000	7,000 to 8,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	6,584	4,790	5,042	5,144	6,000	5,000 to 7,000
Electricity	1,526	1,747	2,041	2,148	2,166	2,150	1,942	2,393	2,572	3,000	2,000 to 4,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,484	4,588	4,716	5,000	5,000 to 6,000
Manufactured inputs	22,435	23,827	22,229	20,870	21,505	20,988	17,003	18,233	19,432	22,000	21,000 to 24,000
Short-term interest	8,717	10,722	11,349	10,615	10,398	8,821	7,795	7,305	7,287	8,000	7,000 to 8,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,678	8,131	8,187	7,885	7,000	6,000 to 8,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,928	15,492	15,172	15,000	14,000 to 16,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,546	6,858	7,000	7,000 to 8,000
Contract & hired labor	8,293	8,931	10,075	9,725	9,729	8,799	9,890	10,821	11,202	11,000	10,000 to 12,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,171	2,000	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,823	3,279	4,000	4,000 to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,308	8,809	9,000	9,000 to 10,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,771	31,452	32,319	34,000	33,000 to 37,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,918	17,664	17,722	18,000	18,000 to 20,000
Taxes 1/	3,891	4,246	4,036	4,460	4,059	4,231	4,125	4,345	4,378	4,000	4,000 to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,080	8,840	8,158	6,737	7,060	7,527	8,000	8,000 to 9,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,804	33,236	29,780	29,089	29,627	31,000	31,000 to 33,000
Total production expenses	133,139	139,444	139,980	140,377	142,669	133,058	122,387	127,998	134,963	142,000	142,000 to 147,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast. 1987 & 1988 expenses include preliminary revisions from the Census of Agriculture.

Information contact: Chris McGath (202) 786-1804, Diane Bertelsen (202) 786-1808.

Table 37.—CCC Net Outlays by Commodity &amp; Function

	Fiscal year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990 E	1991 E
	\$ million									
<b>COMMODITY/PROGRAM</b>										
Feed grains										
Corn	4,281	5,720	-934	4,403	10,524	12,348	8,227	2,863	2,638	1,665
Grain sorghum	986	814	76	463	1,185	1,203	784	487	433	222
Barley	129	288	89	338	471	394	57	45	-88	37
Oats	-1	11	5	2	26	17	-2	1	-7	0
Corn & oat products	0	2	6	7	5	7	7	8	6	9
Total feed grains	5,397	6,815	-758	5,211	12,211	13,067	9,053	3,384	2,984	1,933
Wheat	2,238	3,419	2,536	4,891	3,440	2,838	878	53	876	1,951
Rice	184	664	333	990	847	906	128	631	701	689
Upland cotton	1,190	1,363	244	1,553	2,142	1,786	666	1,461	-109	434
Tobacco	103	880	346	455	253	-348	-453	-367	-242	-223
Dairy	2,182	2,528	1,502	2,085	2,337	1,166	1,295	679	423	446
Soybeans	169	288	-585	711	1,597	-476	-1,678	-86	116	50
Peanuts	12	-6	1	12	32	8	7	13	-6	3
Sugar	-5	49	10	184	214	-85	-248	-25	0	0
Honey	27	48	90	81	89	73	100	42	63	60
Wool	84	94	132	109	123	152	1/ 5	93	112	167
Operating expense 3/	294	328	362	346	457	535	814	620	827	634
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	853	527
Export programs 4/	65	398	743	134	102	278	200	-102	-39	87
1989/90 Disaster/										
Livestock Assistance	0	0	0	0	0	0	0	3,919	2/ 196	76
Other	-225	-1,542	1,295	-314	486	371	1,695	143	587	867
Total	11,652	18,851	7,315	17,883	25,841	22,408	12,461	10,523	6,742	7,651
<b>FUNCTION</b>										
Price-support loans (net)	7,015	8,438	-27	6,272	13,628	12,199	4,570	-926	-276	197
Direct Payments										
Deficiency	1,185	2,780	612	6,302	6,166	4,833	3,971	5,798	4,156	4,584
Diversion	0	705	1,504	1,525	84	382	8	-1	0	0
Dairy termination	0	0	0	0	489	587	280	158	178	100
Other	0	0	0	0	27	80	0	42	1	11
Disaster	306	115	1	0	0	0	6	4	0	0
Total direct payments	1,491	3,600	2,117	7,827	6,746	5,862	4,245	8,011	4,337	4,695
1988/89 crop disaster	0	0	0	0	0	0	0	3,386	2/ 16	0
Emergency livestock/										
forage assist. 1/ 2/	18	0	0	0	0	0	31	533	180	76
Purchases (net)	2,031	2,540	1,470	1,331	1,870	-479	-1,131	116	-122	37
Producer storage										
payments	679	984	268	329	485	832	668	174	175	27
Processing, storage,										
& transportation	356	665	639	657	1,013	1,650	1,113	659	380	306
Operating expense 3/	294	328	362	346	457	535	814	620	827	634
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	853	527
Export programs 4/	65	398	743	134	102	278	200	-102	-39	87
Other	-281	-1,607	679	-648	329	305	1,757	-13	811	1,085
Total	11,652	18,851	7,315	17,883	25,841	22,408	12,461	10,523	6,742	7,651

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Benefits to farmers under the Disaster Assistance Act of 1989 are being paid in generic certificates & are not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, & CCC Transfers to the General Sales Manager. E = Estimated in the fiscal 1991 Mid-Session Review based on June, 1990 supply and demand estimates. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazzalino (202) 447-5148.

## Food Expenditures

Table 38.—Food Expenditure Estimates

	Annual			1990			1990 year-to-date		
	1987	1988	1989	Mar	Apr P	May P	Mar	Apr P	May P
\$ billion									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	242.1 182.0	255.1 198.4	271.8 208.0	24.1 18.3	23.0 17.9	24.5 18.5	87.5 60.3	90.5 68.2	115.0 88.7
1989 billion									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	268.7 198.2	271.7 205.4	271.5 208.0	22.7 17.6	21.8 17.2	23.2 17.7	83.0 48.9	85.5 66.1	108.7 83.8
Percent change from year earlier (\$ bil.)									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	3.2 10.9	5.4 5.2	6.5 -6.4	6.7 6.5	6.1 3.6	5.7 3.6	6.4 5.0	6.3 4.6	6.2 4.4
Percent change from year earlier (1989 \$ bil.)									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	-1.1 6.6	1.1 3.6	-0.1 1.3	-0.7 1.6	0.0 -1.3	0.4 -1.3	-1.4 0.3	-1.1 -0.1	-0.8 -0.4

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food not alcoholic beverages & pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug. 1987.

Information contact: Alden Manchester (202) 786-1880.

## Transportation

Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments

	Annual			1989		1990				
	1987	1988	1989	May	Dec	Jan	Feb	Mar	Apr	May
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.1	104.8	106.4	106.0	106.9	107.1	107.1 P	107.1 P	107.4 P	107.3 P
Farm products	99.3	105.6	108.4	108.6	108.5	109.3	108.8 P	109.1 P	109.9 P	110.1 P
Grain	98.7	105.4	108.7	108.8	108.7	109.1	109.0 P	109.2 P	110.3 P	110.0 P
Food products	98.6	103.2	103.9	103.5	104.2	105.0	105.0 P	105.0 P	105.6 P	105.4 P
Grain shipments										
Rail carloadings (1,000 cwt) 2/	29.0	30.7	28.4	25.9	29.4 P	32.7 P	32.4 P	29.5 P	27.9 P	25.8 P
Fresh fruit & vegetable shipments*										
Piggy back (1,000 cwt) 3/ 4/	588	535	505	775	459	466	453	370	401	598
Rail (1,000 cwt) 3/ 4/	630	607	596	715	725	704	684	572	452	590
Truck (1,000 cwt) 3/ 4/	9,137	9,679	9,701	12,028	9,278	7,888	7,776	8,738	10,179	11,646
Cost of operating trucks hauling produce 5/										
Owner operator (cts./mile)	118.3	118.7	124.1	123.5	128.9	128.9	127.5	127.0	127.5	127.2
Fleet operation (cts./mile)	116.5	118.4	123.4	123.4	128.7	128.7	127.5	126.5	127.1	126.7

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1989 & 1990. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.Q. Hutchinson (202) 786-1840.

## Indicators of Farm Productivity

Table 40.—Indexes of Farm Production Input Use & Productivity

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 2/
1977=100										
Farm output	104	118	118	98	112	118	111	110	102	111
All livestock products 3/	108	109	107	109	107	110	110	113	116	118
Meat animals	107	108	101	104	101	102	100	102	104	103
Dairy products	105	108	110	114	110	117	116	115	118	118
Poultry & eggs	115	119	119	120	123	128	133	144	150	156
All crops 4/	101	117	117	88	111	118	109	108	92	108
Feed grains	97	121	122	87	116	134	123	106	73	108
Hay & forage	98	106	109	100	107	108	106	107	98	101
Food grains	121	144	138	117	129	121	106	107	98	107
Sugar crops	97	107	96	93	95	97	106	111	105	106
Cotton	79	109	85	55	91	94	69	103	108	88
Tobacco	93	108	104	75	90	81	83	62	72	74
Oil crops	99	114	121	91	106	117	110	108	89	106
Cropland used for crops	101	102	101	88	98	98	94	88	88	90
Crop production per acre	100	115	118	100	112	120	116	122	107	118
Farm Input 5/	103	102	99	97	95	92	87	86	85	—
Farm real estate	103	104	102	101	97	95	93	92	91	—
Mechanical power & machinery	101	98	92	88	84	80	75	72	71	—
Agricultural chemicals	123	129	118	105	121	123	110	111	113	—
Feed, seed, & livestock purchases	114	108	108	110	106	106	103	111	107	—
Farm output per unit of input	101	116	117	99	119	128	127	128	120	—
Output per hour of labor										
Farm 6/	109	123	125	99	121	139	139	142	134	—
Nonfarm 7/	99	100	99	102	105	106	108	109	111	—

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1986, ECIFS 5-6. 2/ Preliminary indexes for 1989 based on Crop Production: 1989 Summary, released in January 1990, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. — = not available.

Information contact: Jim Hauver (202) 786-1432.

## Food Supply and Use

Table 41.—Per Capita Consumption of Major Food Commodities

(See the January-February 1990 issue.)

Information contact: Judy Putnam (202) 786-1870.

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